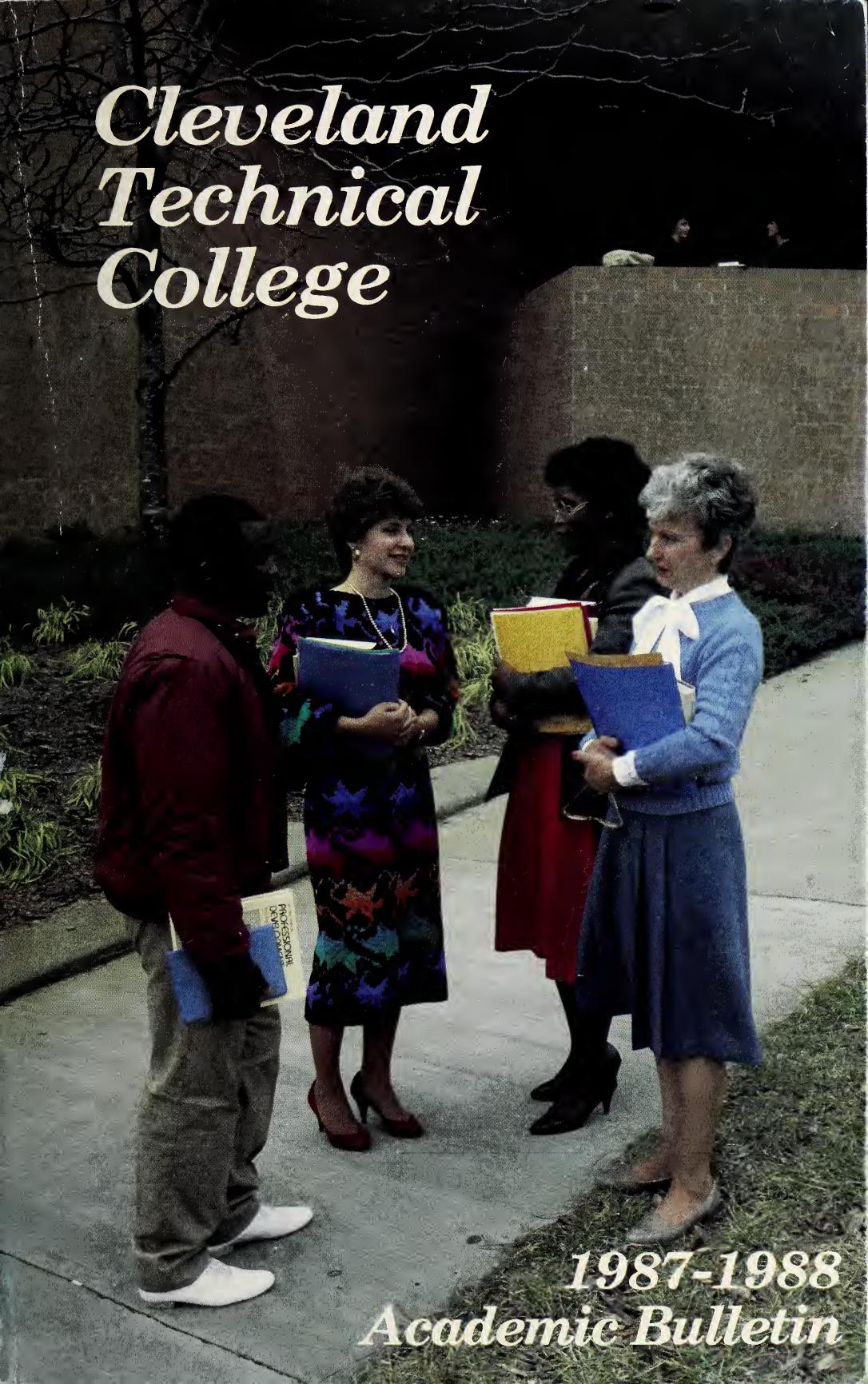


Cleveland Technical College



1987-1988
Academic Bulletin

NOTE

Cleveland Technical College issues this catalog for the purpose of furnishing prospective students and other interested persons with information about the institution and its programs. Announcements contained herein are subject to change without notice and may not be regarded in the nature of binding obligations on the College or the State of North Carolina. Efforts will be made to keep changes to a minimum, but changes in policy by the State Board of Community Colleges, the Department of Community Colleges, or by local conditions may make some alterations in curriculum, fees, etc., necessary.

VISITORS

Visitors, and in particular prospective students, are always welcome at Cleveland Technical College. The Student Services office will provide guide services for groups or individuals between 8:30 a.m. and 3:30 p.m. Monday through Friday. The school is open until 10:00 p.m. Monday through Thursday and until 4:00 p.m. on Friday and individuals may visit at their convenience. Questions about the school and its programs will be answered by someone from the Student Services office.

APPROVED BY

North Carolina State Board of Nursing
North Carolina Department of Veterans Education
American Medical Association for Radiologic Technology

MEMBER INSTITUTION OF

American Association of Community and Junior Colleges
North Carolina Association of Colleges and Universities
North Carolina Department of Community Colleges
Southern Association of Colleges and Schools
Southern Association of Community and Junior Colleges

ACCREDITED BY

The Commission on Colleges of the
Southern Association of Colleges and Schools

GENERAL INFORMATION

CLEVELAND TECHNICAL COLLEGE "An Equal Opportunity Educational Institution"

DIRECTORY OF CORRESPONDENCE

Telephone (704) 484-4000

Inquiries will receive prompt attention if addressed to the Administrative Offices below at Cleveland Technical College, 137 South Post Road, Shelby, North Carolina 28150:

Academic Affairs	Vice-President—Instruction
Administrative Affairs.....	The President
Admission	Director of Admissions
Adult Basic Education	Coordinator, Basic Programs
Entrance Procedures	Director of Admissions
Evaluation of Credits	Director of Admissions
Financial and Business Affairs	Vice-President-Business Affairs
Gifts and Bequests	The President
High School Program, GED	Coordinator, Basic Programs
Human Resources Development Program.....	Recruiter, HRD
Job Placement Service.....	Director of Student Placement
Non-Credit Courses	Dean of Continuing Education
Placement Testing	Director of Career Center
Registration	Registrar
Student Financial Aid	Director of Financial Aid
Student Affairs	Vice-President-Student Services
Transcripts	Registrar
Tutoring	Coordinator, Learning Lab
Veterans Affairs	Director of Veterans Affairs

TABLE OF CONTENTS

Directory of Correspondence	1
Calendar of Events 1986-87	3
Calendar of Events 1987-88	4
General Information	1
List of Curriculum Programs	8
Admissions	9
Academic Regulations	15
Student Services	20
Financial Information	28
Associate Degree Programs	41
Associate in General Education Degree	42
Communications Technology	46
Business, Accounting and Management	48
Accounting	48
Business Administration	49
Industrial Management	51
Computer Programming Department	52
Business Computer Programming	52
Secretarial and Fashion Sciences Department	54
Secretarial-Executive	54
General Office Technology	55
Secretarial-Medical	57
Fashion Merchandising and Marketing	58
Criminal Justice Department	60
Criminal Justice-Law Enforcement Option	60
Criminal Justice-Corrections Option	62
Criminal Justice-Security Option	63
Radiologic Technology Department	66
Course Descriptions - Associate Degree Programs	68
Allied Services Department	97
Electronics Engineering Technology	97
Air Conditioning, Heating and Refrigeration	100
Auto Body Repair	103
Auto Mechanics	105
*Carpentry and Cabinetmaking	107
Diesel Vehicle (Truck) Maintenance	108
Electrical Installation and Maintenance	110
Electronic Servicing	112
*Food Service Specialist	114
Industrial Maintenance	115
Machinist	117
*Plumbing and Pipefitting	120
Welding	121
Nursing Department	123
Practical Nursing	123
Course Descriptions - Vocational Diploma Programs	125
Industry and Community Services	142
Continuing Education	142
Learning Resources Center	163
Personnel of the College	165

*Program taught only at Prison Unit

CALENDAR OF EVENTS 1986-87

Fall Quarter

August 25	Monday	Orientation
August 27	Wednesday	Staff Development Day
September 8	Monday	Registration
September 10	Wednesday	First Day of Classes
September 17	Wednesday	Late Registration Ends
November 4	Tuesday	Last Day to Drop Courses
November 25	Tuesday	Fall Quarter Ends-Graduation
November 27-28	Thursday, Friday	Thanksgiving Holidays

Winter Quarter

November 24	Monday	Orientation
December 1	Monday	Registration
December 3	Wednesday	First Day of Classes
December 10	Wednesday	Late Registration Ends
December 19	Friday	Christmas Holidays Begin After Classes
January 5	Monday	Classes Resume
February 17	Tuesday	Last Day to Drop Courses
March 3	Tuesday	Winter Quarter Ends-Graduation

Spring Quarter

March 2	Monday	Orientation
March 11	Wednesday	Registration
March 16	Monday	First Day of Classes
March 20	Friday	Late Registration Ends
April 7	Tuesday	Staff Development Day
April 20	Monday	Easter Holiday
May 12	Tuesday	Last Day to Drop Courses
June 2	Tuesday	Spring Quarter Ends-Graduation

Summer Quarter

June 1	Monday	Orientation
June 3	Wednesday	Registration
June 10	Wednesday	First Day of Classes
June 17	Wednesday	Late Registration Ends
June 29-July 3	Monday-Friday	Student Holidays
August 11	Tuesday	Last Day to Drop Courses
September 1	Tuesday	Summer Quarter Ends-Graduation

CALENDAR OF EVENTS

1987-88

Fall Quarter

August 31	Monday	Orientation
September 2	Wednesday	Staff Development Day
September 8	Tuesday	Registration
September 10	Thursday	First Day of Classes
September 17	Thursday	Late Registration Ends
November 4	Wednesday	Last Day to Drop Courses
November 25	Wednesday	Fall Quarter Ends-Graduation
November 26-27	Thursday, Friday	Thanksgiving Holidays

Winter Quarter

November 24	Tuesday	Orientation
December 1	Tuesday	Registration
December 2	Wednesday	First Day of Classes
December 9	Wednesday	Late Registration Ends
December 18	Friday	Christmas Holidays Begin After Classes
January 4	Monday	Classes Resume
February 9	Tuesday	Last Day to Drop Courses
March 1	Tuesday	Winter Quarter Ends-Graduation

Spring Quarter

February 29	Monday	Orientation
March 7	Monday	Registration
March 8	Tuesday	First Day of Classes
March 11	Friday	Late Registration Ends
April 4	Monday	Easter Holiday
April 12	Tuesday	Staff Development Day
May 3	Tuesday	Last Day to Drop Courses
May 25	Wednesday	Spring Quarter Ends-Graduation

Summer Quarter

May 23	Monday	Orientation
May 31	Tuesday	Registration
June 1	Wednesday	First Day of Classes
June 8	Wednesday	Late Registration Ends
July 4-8	Monday-Friday	Student Holidays
August 2	Tuesday	Last Day to Drop Courses
August 23	Tuesday	Summer Quarter Ends-Graduation

HISTORY

The 1963 North Carolina General Assembly authorized a system of comprehensive community colleges, technical institutes, industrial education centers, and extension units to be established and placed under the jurisdiction of the State Board of Education.

The Cleveland Unit of Gaston College was established on July 1, 1965, as a result of the vision and effort of many individuals over several years. The Shelby Chamber of Commerce and the County Commissioners worked with the State Board of Education and Gaston College in establishing a unit of the college. Two buildings were rented by the County Commissioners at 118 North Morgan Street to start the school.

On July 11, 1965, James B. Petty was elected director of the Unit. The first classes began in September 1965, in the old Porter Brothers and McBrayer buildings. The number of classes and students has grown rapidly since that date.

On October 2, 1967, a local Board of Trustees was officially appointed and the Extension Unit became Cleveland County Technical Institute, a unit of the Department of Community Colleges of North Carolina.

In July 1969, the institute leased the County Home property at 137 South Post Road for a campus and moved to the new location.

Having secured a grant of \$500,000 from the Cleveland County Board of Commissioners and matched by a like amount from the State of North Carolina, architects were commissioned in 1972 to plan a long range building program on the present campus and the first two buildings for the new campus layout. The first two new buildings were completed and placed in use for the Fall Quarter 1974.

In June 1977 the voters of Cleveland County approved a \$5,000,000 bond referendum to construct the next two phases of the long-range development plan for the campus.

Construction began in summer 1979 on these buildings to add approximately 100,000 additional square feet of permanent facilities including a new Learning Resources Center, classrooms, shops, laboratories, snack bar, bookstore, and offices. Shop additions were placed in use for Fall Quarter 1980. The main additional construction, known as the Campus Center Building, was placed in use in March 1981. Formal dedication was held October 18, 1981.

On March 3, 1980, the Cleveland County Board of Commissioners voted to concur with the request by the Board of Trustees for a name change of Cleveland County Technical Institute to Cleveland Technical College.

PURPOSE

Cleveland Technical College is a two year public college whose purpose is to provide the adult citizens of Cleveland County with opportunities for personal growth and development. This purpose shall be pursued consistent with the philosophy of the "open door", which reflects the commitment of Cleveland Technical College to meet each student at her or his skill level and to help that student improve.

To fulfill this purpose the College will:

1. Provide a comprehensive series of quality one and two year technical, vocational and general education programs that will impart profitable skills to students.
2. Provide the opportunity for individuals to complete Adult Basic Education, High School Equivalency Programs, and General Educational Development Preparatory/Examination Program (GED).
3. Provide short term courses that will meet adult educational and community service needs.
4. Provide guidance and counseling services that can assist students to better understand themselves and their career options.
5. Provide cultural and other enrichment programs that can enhance the quality of life in Cleveland County.

ACCREDITATION

Cleveland Technical College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees; The North Carolina State Board of Community Colleges; the American Medical Association for Radiologic Technology; The North Carolina State Board of Nursing for Licensed Practical Nursing.

VISITORS

Visitors need to receive permission from the main office prior to visiting classrooms, shops, or labs.

NIGHT OFFERINGS

The College offers an extensive night program which includes most of the credit courses given in the daytime, as well as non-credit courses primarily for adult general interest or occupational upgrading or retraining.

The availability of credit courses at night allows the student who must work while attending school the opportunity to coordinate school activities with employment. A student may enroll for both day and night classes.

It is possible to complete all work toward a degree or diploma by attending at night. The rate of progress through a program will depend upon the number of courses taken each quarter. A reduced load will require a longer period to complete program requirements.

The College reserves the right to cancel any class, day or night, for which there is insufficient enrollment.

NOTICE OF COLLEGE REGULATIONS

The college has a genuine interest and concern for the integrity of all students; therefore all regulations found in this catalog, the student handbook, announcements posted on bulletin boards will be followed by all students. Each student is responsible for becoming familiar with these publications and reading official announcements to be informed of current policies.

NON-DISCRIMINATION POLICY

From its founding Cleveland Technical College's Board of Trustees and Staff have recognized the importance of equal opportunity in all phases of the College's operations and have adhered to a policy of non-discrimination on the basis of race, color, sex, age, religion, national origin, physical or mental disability, or other non-relevant factors. This policy continues to apply to both students and employees at all levels of the school's operations. Anyone who believes this policy has been violated may seek satisfaction through the Due Process procedures outlined in this catalog.

CURRICULUM PROGRAMS OF STUDY

GENERAL EDUCATION AND COMMUNICATIONS DEPARTMENT

*Associate in General Education Degree (G-020)

*Communications Technology (T-154) (ASSOCIATE IN APPLIED SCIENCE DEGREE)

BUSINESS, ACCOUNTING AND MANAGEMENT DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREES)

*Accounting (T-016)

*Business Administration (T-018)

*Industrial Management (T-049)

COMPUTER PROGRAMMING DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREE)

*Business Computer Programming (T-022)

SECRETARIAL AND FASHION DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREES)

*Secretarial-Executive (T-030)

*Fashion Merchandising and Marketing Technology (T-143)

*General Office Technology (T-033)

*Secretarial-Medical (T-032)

CRIMINAL JUSTICE DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREE)

*Criminal Justice - Protective Service Technology (T-129)

RADIOLOGIC TECHNOLOGY DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREE)

Radiologic Technology (Day only) (T-061)

ALLIED SERVICES DEPARTMENT

*Electronic Engineering Technology (ASSOCIATE IN APPLIED SCIENCE DEGREE) (T-045)

VOCATIONAL DIPLOMAS IN:

*Air Conditioning, Heating, and Refrigeration (V-024)

*Auto Body Repair (V-001)

*Auto Mechanics (V-003)

**Carpentry and Cabinetmaking (V-007)

*Diesel Vehicle (Truck) Mechanics (V-013)

*Electrical Installation and Maintenance (V-018)

*Electronic Servicing (V-042)

**Food Service Specialist (V-053)

*Industrial Maintenance (V-028)

*Machinist (V-032)

**Plumbing and Pipefitting (V-037)

*Welding (V-050)

NURSING DEPARTMENT (VOCATIONAL DIPLOMA)

Practical Nursing (Day only) (V-038)

*CURRICULUMS OFFERED IN BOTH DAY AND NIGHT SCHEDULES

**OFFERED AT PRISON UNIT ONLY

(The College reserves the right to cancel any class or curriculum, day or night, for which there is insufficient enrollment.)

ADMISSIONS

ADMISSIONS INFORMATION

POLICY AND PROCEDURE

Cleveland Technical College operates under an "open door" admissions policy to offer occupational and adult education to all persons who are able to profit from instruction. Placement of students in the various programs of instruction is selective with special emphasis on career guidance and individual admissions counseling. The objective is to assist the student in establishing realistic goals and to assure reasonable success in the particular program of instruction the student desires to pursue.

As a part of the admissions process for curriculum students, placement tests may be given for guidance purposes, transcripts of previous education are required, and a personal interview is recommended with each student prior to placement in a program of instruction.

Application for admission forms and detailed information on programs of instruction offered may be secured by writing to: Student Services Office, Cleveland Technical College, 137 South Post Road, Shelby, North Carolina 28150 or by calling (704) 484-4000.

GENERAL REQUIREMENTS

Admission is available to persons who are eighteen years of age or older. In case a person is less than eighteen and a high school graduate, the minimum age requirement has been met.

High School graduation or its equivalent is ordinarily required for admission to curriculum programs. However, exceptions may be made in certain circumstances. Adult education and Learning Laboratory courses are offered for students who need to strengthen their general education or eliminate deficiencies.

A general medical examination may be required for some programs.

The College reserves the right to refuse admission to a student if it appears that such action is in the best interest of the College and/or the student. Any student so refused admission may appeal this action through due process.

Specific procedures for admission to continuing educational programs will be found under that section of this catalog.

ADMISSIONS REQUIREMENTS FOR ALL CURRICULUM PROGRAMS

1. Be at least eighteen years of age, or the applicant's high school class must have graduated.
2. Take local placement test if requested by admissions office. These tests are used to assist the applicant in the selection of a program of study suited to interest and general capabilities and in registering for the appropriate sections in English and Mathematics.
3. A complete physical and dental examination is required for Practical Nurse applicants: a complete physical examination is required for Radiologic Technology applicants. (See page 66 for additional requirements for Rad. Tech. applicants and page 123 for additional requirements for Practical Nurse applicants.)
4. Have a personal interview with an Admissions office representative and the Department Head for applicants to allied health programs.
5. High School graduation or its equivalent is ordinarily required for curriculum programs. Provide a transcript showing high school graduation, GED score of 225 above, or a state issued GED Certificate. However, exceptions may be made in certain circumstances where other evidence is available to indicate the applicant can profit from the program for which the person has applied.

ADMISSION PROCEDURE FOR ALL CURRICULUM PROGRAMS

1. Submit completed application form.
2. Have transcripts of all previous education mailed to the College.
3. Have counseling interview (after taking the test battery if this has been requested by the admissions office).
4. Receive a letter of acceptance from the Director of Admissions.

PROVISIONAL ACCEPTANCE

An applicant for admission who has not met the requirements listed above of submission of transcripts of previous education, evidence of high school graduation or equivalency, and/or testing before the beginning of the quarter for which entry is desired, may be granted provisional acceptance for one academic quarter. All admission requirements must be met within that quarter to be eligible to register for the following quarter.

SPECIAL STUDENT CLASSIFICATION

Special students are those who are enrolled for course credit but not in a curriculum leading to the diploma or the associate degree. Students enrolled in this status will normally be required to meet the prerequisites for the course or to demonstrate a necessary level of competence although they do not have to meet the admission requirements for curriculum programs.

AUDIT STUDENTS

A student may elect to audit a course or courses. Those auditing receive no credit and do not have to take any examinations; otherwise, participation in class is on the same basis as a credit student. The fee for auditing is the same as the fee for credit.

WITHDRAWAL

Students desiring withdrawal from the College should contact the Office of Student Services to obtain necessary forms and procedures for official withdrawal. Withdrawal with a grade W will be allowed except during the final three weeks of a quarter. After that point a grade of NC will be assigned.

READMISSION

Any student who officially withdraws from the College and later wishes readmission must contact the Student Services Office. Readmission conditions will depend upon the individual circumstances, but generally a student is eligible to return at such time as an appropriate course schedule can be worked out.

A former student will not be readmitted until all former and current expense obligations to any program or activity under the administrative jurisdiction of the College have been satisfied.

Any student who is financially indebted to the College by failure to completely meet any outstanding debt such as the following: bad check, tuition, bookstore, library, activity, graduation, parking fines, promissory note, equipment or supplies debt, or any required payment to the College will not be eligible for readmission nor acquire any transcript until such indebtedness is completely cleared.

TRANSFER CREDIT

Cleveland Technical College permits admission with transfer credit for students from member institutions of the North Carolina Department of Community Colleges and other reputable institutions.* Content of such courses must closely parallel those for which credit is sought at the College. Each application for transfer of credit will be evaluated according to the individual situation. Quality points earned at the other institution do not transfer.

TRANSFER CREDIT TO OTHER SCHOOLS OR COLLEGES

There are an increasing number of schools and colleges who are accepting course work completed in a technical program or in the general education program at CTC for credit toward the Bachelor's Degree. Most of these colleges consider each applicant and his record individually and the courses for which credit is sought must be similar to the course(s) offered by that institution. Some colleges give credit on the basis of examinations. Many colleges give full credit for the Associate in Applied Science Degree or Associate in General Education Degree toward a Bachelor of Arts, Bachelor of Science or Bachelor of Technology.

For those students who do desire to continue their education after graduation from CTC, there are expanding opportunities to do so.

The following colleges have indicated to us their willingness to accept transfers from Cleveland Technical College. Most of them prefer that the Associate Degree be completed before transferring.

Gardner-Webb College*

Elon College*

Limestone College*

Meredith College*

Winthrop College*

Queens College*

Western Carolina University*

High Point College*

Mars Hill College—all degree programs

UNC-Charlotte—E.E.T. into their Bachelor of Engineering Technology program; Criminal Justice into their B.S. in Law Enforcement program. Other programs and courses evaluated on individual basis.

Appalachian State University—Accounting, Business Administration, Secretarial and Industrial Management transfers into their Bachelor of Technology degree programs.

Campbell University—General Education, Business Administration and Accounting.

*Provided the transfer student is eligible to return to the last institution attended.

*will accept all programs except Radiologic Technology and Electronics Engineering Technology

Our students have also transferred to the following colleges:

Winston-Salem State University	Belmont-Abbey College
A.&T. State University	Sacred-Heart College
N.C. Central University	Shaw University
Pembroke State University	Barber-Scotia College
Fayetteville State University	Livingstone College
Virginia Polytechnic Institute and State University	Spelman College
U. of S.C. at Spartanburg	Several out-of-state colleges
Johnson C. Smith University	

Some of the other colleges not listed will consider some transfer of courses on an individual evaluation basis. Any student interested in pursuing that possibility should talk with the department chairman of the planned major field at the particular college to which transfer is desired.

TRANSFER RESPONSIBILITY

The College staff will cooperate with each student in planning a transfer program. However, it is the responsibility of the student to determine that courses and credit will transfer to the receiving institution.

The acceptance of courses taken at Cleveland Technical College is determined solely by the institution to which the student transfers.

The student planning to transfer will have less difficulty in completing his transfer satisfactorily if he follows these steps:

1. Decide early which senior college to attend. Contact the college for recommendations concerning appropriate courses.
2. Obtain a current copy of the catalog of that college and study its entrance requirements.
3. Confer with faculty advisor at CTC about transfer plans.
4. Check carefully at least a quarter or two before transfer to be sure that all necessary requirements are being met and all necessary steps are taken.

Changes in the student's major field of study or choice of a senior institution may result in transfer problems. Such changes should be made only after careful consultation with an advisor.

TRANSFER OF CREDIT WITHIN CLEVELAND TECHNICAL COLLEGE

Credit earned in any institutional degree program may be credited toward a degree or diploma program upon evaluation by the Director of Admissions. Credits earned in a diploma program are not usually acceptable to an associate degree program but may be credited toward a second diploma major. If graduation requirements change during the time a student is enrolled, the student may elect to satisfy the requirements in effect at the time of the original enrollment or the new requirements.

Any student who is currently enrolled or has graduated from a curriculum program of the College and wishes to transfer to another curriculum program must follow these procedures:

1. Go to Student Services and update his/her application on file, stating the new curriculum and quarter of entrance.
2. Meet the admission requirements for the desired program as stated in the school catalog.

Applicants will receive notification of admission by letter from the Director of Admissions along with an "Evaluation of Transfer Credit" form denoting hours for which credit will be given.

REGISTRATION

When acceptance letters are sent to applicants the date for registration is announced. At registration, students will be assigned class schedules, pay fees, and purchase books. Each student is expected to register and begin classes on schedule. A student is not registered *until tuition and fees are paid in the Business Office.*



ACADEMIC REGULATIONS

DROP-ADD PERIOD

At the beginning of every quarter there is a period for students to change schedules and to drop and add courses. This time limit for such changes is one week from the first day of classes. No student is to make a change without first being cleared by the Academic Advisor and the Registrar. After this change period courses may be dropped but courses may not be added. Courses dropped (within the last three weeks of a quarter) will result in a grade of no credit (NC) being entered on the student's transcript.

GRADING SYSTEM

Students will be evaluated on the achievement of technical skills, ability to work under supervision, interest in work, initiative, and ability to apply related information.

At the end of each quarter students will be evaluated in each course as follows:

Letter Grade	Numerical Grade	Explanation	Quality Points
A	93-100	Excellent	4 Points per qtr./hr.
B	85-92	Good	3 Points per qtr./hr.
C	77-84	Average	2 Points per qtr./hr.
D	70-76	Below Average	1 Point per qtr./hr.
NC	Below 70	(No Credit) Non-Completion of course requirements	0 Point per qtr./hr.
I	Work not completed	Requirements may be completed in next qtr.	0 Point per qtr./hr.
W		Official Withdrawals	0 Point per qtr./hr. (No credit hours earned)
CE		Credit by Exam	0 Point per qtr./hr.
AU		Audit	0 Point per qtr./hr.

Any student who receives an I may request to negotiate a written contract with the instructor involved. Contracts negotiated between the student and the instructor will specify a definite completion date for the requirements in addition to the types of activities set forth by the instructor to help the student achieve the minimum objectives of the course. If the student does not complete the minimum objectives in the time negotiated in the contract, the student will be dropped from the course and a no credit (NC) will be entered on the record. Upon completion of the contract in the specified time the instructor will notify the registrar to change the I to a letter grade. The contract completion date must be within the quarter following receipt of the I.

QUALITY POINT AVERAGE

The QPA is the most important example of a student's academic progress. The computation of a QPA is shown below as an example to simplify the average. It is determined by dividing the total number of quality points earned by the total number of quarter hours attempted, excluding I, W, CE, and Y grades. The cumulative QPA is based on all grades while a student is enrolled in a curriculum. The current QPA is an indication of one quarter of work in a curriculum.

EXAMPLE OF COMPUTING THE QPA

Course	Grade	Hrs. Attempted	QP per Credit	Grade Points
			Hour	Earned
ENG 101	A	4	× 4	= 16
SOC 101	B	4	× 3	= 12
MAT 110	C	4	× 2	= 8
BIO 101	D	<u>4</u>	× 1	= <u>4</u>
		16		40
Quality Points Earned			2.50	2.50
Hours Attempted			16) 40.00	

QUARTERLY DEAN'S LIST

Students who receive a 4.0 grade point average at the end of the quarter and are enrolled full-time will be on the Dean's List for that quarter.

CLASS ATTENDANCE POLICY

Absences are a serious deterrent to good scholarship; it is impossible to receive instruction, obtain knowledge or gain skill when absent. Although there are numerous reasons for absences such as personal illness, death in the family, work conflicts, or unexpected emergencies, all absences will be counted in the 20% maximum. A student, who, during a quarter, incurs in any course an absence in excess of twenty per cent (20%) of the class hours, for that course may be dropped from the course (without credit).

Absences may be considered legitimate and eligible for make-up at the discretion of the instructor. The student is responsible for seeing the instructor, giving the reason for the absences, and requesting make-up assignments. This is to include students on rotating shift work schedules.

An instructor may refuse admission to class to any student who arrives more than ten minutes late to a class. One-half day's absence will be counted if a student leaves thirty minutes or more early.

The student may appeal any decision under these policies to the Due Process Committee.

ACADEMIC PROGRESS

The following cumulative grade point averages are the minimums which must be attained in order for a student to make reasonable progress toward graduation. A 2.00 grade point average is required for graduation.

ASSOCIATE DEGREE PROGRAMS

Cumulative Quarter Hours	Minimum Grade Point Average
0-24	1.20
25-48	1.40
49-72	1.60
73-96	1.80
	(2.00 for Gen. Edu. Degree)
97 or more	2.00

VOCATIONAL DIPLOMA PROGRAMS

0-18	1.25
19-36	1.50
37-54	1.75
55 or more	2.00

Any student who falls below the specified minimum at the end of any quarter will be placed on academic probation for the following quarter. (*To be removed from probation the student must attain the appropriate minimum grade point average by the end of the probation quarter; otherwise, the student will be suspended from that program for at least one quarter.)

Re-entry in cases of suspended students is handled on an individual basis, but will often result in an extended delay due to the course sequence of the curriculum. Re-entry is affected by applying under the same procedures as an original application.

The privilege of appeal is provided to the suspended student. The student is required to write a letter to the Due Process Committee explaining the appeal and must appear before this Committee in person should the Committee so desire. The appeal may be carried to the Board of Trustees at the student's request.

COURSE REPEAT REGULATIONS

A student who does not complete a required major curriculum course must repeat the course until it is completed before being eligible to graduate with the Associate Degree or the diploma.

When a course is repeated, the first attempt will be omitted from computation of minimum graduation requirements and only the second grade will count.

*In certain specialty programs (i.e., Practical Nursing and Radiologic Technology) every major specialty course must be passed each quarter before enrolling for the following quarter.

CREDIT HOURS, CONTACT HOURS, AND COURSE LOAD

Each course listed is followed by a notation on the number of quarter hours credit it carries. Normally, the number of quarter hours earned is based on the number of class, laboratory, or shop hours spent under supervision of the course instructor per week for the quarter.

Usually one (1) quarter hour credit is given for each hour of class per week, for each two hours of laboratory work per week, or for each three hours of manipulative laboratory or shop per week.

Contact hours are the number of actual clock hours a student is in attendance during one week.

Students enrolled for 12 or more credit hours are classified as full-time students. Students enrolled in less than 12 credit hours are classified as part-time.

Course load for veterans benefits is as follows: (1) for diploma vocational programs: full-time attendance equals 22 or more contact hours per week; 3/4 time attendance equals 16-21 contact hours per week; 1/2 time attendance equals 11-15 contact hours per week; (2) for degree programs: full-time attendance equals 12 or more credit hours per quarter; 3/4 time attendance equals 9-11 credit hours per quarter; 1/2 time attendance equals 6-8 credit hours per quarter. (For less than 1/2 time attendance in any program the VA does not pay a monthly allowance but will only pay the actual cost of tuition.)

CREDIT BY PROFICIENCY EXAMINATION

A student may be allowed credit toward graduation for past schooling or work experience through proficiency examinations. The student should confer with the Faculty Advisor for qualifications for these provisions and to be informed of the procedure to follow.

A grade symbol of CE (credit examination) will be awarded for courses for which credit is given on the basis of proficiency examination. The course hours for such courses posted as CE will be computed toward graduation requirements but not for the computation of Honors, nor for computation of overall QPA.

GRADUATION HONORS

To graduate with High Honors a student must earn a QPA of 3.5-4.0 in courses presented for graduation. To graduate with Honors a student must earn a QPA of 3.0-3.49 in all courses presented for graduation. To qualify for either honor, a student must not have received any grade lower than a C in the program being completed.

OUTSTANDING STUDENT AWARDS

These awards are made to students who have distinguished themselves by being most outstanding in terms of scholastic achievement, performance and maturity or purpose during their program of instruction at the College. One student may be recognized for each one-year vocational program and each two-year degree program.

REQUIREMENTS FOR GRADUATION

The following are established as minimum requirements for graduation from curriculum programs:

1. Complete course requirements outlined by the curriculum pursued, and earn at least a 2.0 QPA in courses presented for graduation.
2. Complete not less than 96 credit hours for the Associate in General Education degree, 108 credit hours for the Associate in Applied Science Degree, or 64 credit hours for a vocational diploma.
3. Meet with assigned faculty advisor no later than the third (3rd) week of the quarter in which graduation requirements are expected to be completed and complete a graduation check list which is to be submitted to the Registrar. The Registrar will make a complete check of the student's record and either notify the Vice-President for Student Services that everything is in order or notify the student through the advisor that it is not.
4. It is the student's responsibility to check with the Registrar at least 3 weeks in advance of graduation to see that a diploma has been ordered.
5. A graduation fee is required at the time of submission of the graduation check list.
6. Fulfill all financial obligations to the College and secure clearance from the Library.
7. Be present for graduation exercises which are held at the end of each quarter each year. Exceptions to this requirement, in case of unavoidable absences, may only be granted by the Vice-President for Student Services.
8. All prospective graduates must complete one full quarter of work (at least 12 credit hours) at the College before graduation.

STUDENT SERVICES

The Division of Student Services at Cleveland Technical College strives to promote student development by offering a program of services from pre-admissions to successful placement on jobs upon graduation.

Throughout this process such services as testing, counseling, admissions, financial aid, orientation, registration, student activities, health services, research and placement are provided. It is intended that each student will benefit frequently from each service offered.

The first priority of Student Services is the needs and interests of each student enrolled. If these needs and interests are met, then those services provided would have played a major role in assisting students to develop to the maximum and to take their place in a modern day society.

The same services are offered to night students as to day students. The major difference is a more restricted availability of full-time student services staff members at night. Each counselor works one night a week. The Director of Student Activities, working with the Student Government Association, plans a full program for night students.

COUNSELING AND ADVISING

Each student is assigned a counselor who is a member of the Student Services staff and an academic advisor who is generally a faculty member from the curriculum in which the student is enrolled. The academic advisor helps the student plan an academic program and class schedules. The counselor is available to help with personal, educational and vocational problems.

Your counselor and your advisor will assist you in finding available answers to your needs while enrolled at the College but the student must begin the process by seeking out the counselor or advisor.

TESTING

Counseling and testing services are available for students to aid them in determining special interests or abilities. Interest tests can be given at the request of the individual student who may be uncertain of the appropriateness of the program selected or who wishes to utilize the service during pre-registration for aid in determining an initial choice of program. The testing service will also be used to insure the homogeneity of classes.

THE OFFICIAL ACADEMIC RECORD (TRANSCRIPT)

A report of grades earned in each course is produced at the end of each term. A student may be placed on probation or suspended from a program of studies for unsatisfactory work.

An official record of all the student's courses, credits, and grades earned (transcript) is kept in the Registrar's office. The student should maintain a record of courses, credits, and grades each term and check from time to time to see that that record agrees with the Registrar. The record may also help determine eligibility for any activity that requires specific scholastic standards. Copies of the official record are available to the student upon request.

RELEASE OF INFORMATION FROM STUDENT OFFICIAL ACADEMIC RECORDS

The College recognizes the responsibility for maintaining records for each student to preserve authentic evidence of the events and actions that are important and can contribute to the efforts to educate the student and to facilitate the achievement of the educational goals of the College. The following general principles and procedures govern the release of information from student official records:

1. Written consent of the student concerned is required before a transcript or information from his or her official record may be released. Exceptions to the above statement are outlined below:
 - a. The Registrar may release transcripts or information from official records including reports of academic directory information from student records which includes the following: student's name, address, telephone number, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of enrollment, degrees and awards received, and the most recent previous educational agency or institution attended by the student.
 - b. The Registrar may release information pertaining to honor achievements for publication.
2. A student's identification photograph is available to College personnel only.
3. A hold may be applied to the release of a transcript or other information requested from an official record, for a student who has an overdue indebtedness to the college. Such a student continues to have the right to see the official record upon request.

4. The use and release of information from student official records will be determined as outlined above and in compliance with state and federal legislation relating to such records. Action in situations that may not have been anticipated and/or defined above will at all times be based upon the best knowledge available to the professional staff of the College.

JOB PLACEMENT

Cleveland Technical College maintains a placement service to help interested students and alumni find employment. The job placement office works with students individually in meeting their employment needs, whether it is full-time or part-time. Those students or alumni seeking employment should complete an application with the Job Placement Office in Student Services.

STUDENT HOUSING

The College does not have dormitory accommodations available. Any student who needs to locate housing in Shelby should contact the local Chamber of Commerce who will provide a list of local realtors, a local map and other newcomer information.

STUDENT HEALTH

The College does not provide medical, hospital, or surgical services nor does the College assume responsibility for injuries incurred by students when taking part in intramural sports, class or student activities. Medical services are available at the emergency room of Cleveland Memorial Hospital. A doctor is on duty 24 hours a day in the emergency room.

ORIENTATION

To promote rapid and sound adjustment to the educational philosophy, program, and standards of the College new students are expected to participate in an orientation program. The objectives of the orientation program are:

1. To acquaint the new student with the College, its facilities, resources, services, activities, policies, and organizations.
2. To assist the student in taking full advantage of the opportunities offered by the College.
3. To help in developing effective approaches to the problems frequently encountered by beginning students.

THE CAREER DEVELOPMENT CENTER

Cleveland Technical College maintains a career center to assist students and alumni with career needs such as choosing a suitable career, changing occupations, finding a job within a career field, or selecting a school or training program.

ALUMNI ASSOCIATION

Each Cleveland Tech student receiving a diploma or degree is considered a member of the Alumni Association. The aim of the association is to keep former students informed of Cleveland Tech growth, activities, and services. Alumni are encouraged to take advantage of placement services.

EXTRACURRICULAR ACTIVITIES

The Student Government Association and a variety of clubs, organizations, and intramural sports are supervised by the Director of Student Activities.

STUDENT CLUBS

Student clubs may be organized with the approval of the SGA and the President of the College. These may be related to the vocational goals of the students, or may serve as civic organizations or special interest areas of the students.

Image Makers is a club organized to encourage student and staff interest in photography.

Le Club de Esprit is comprised of students within the Fashion Merchandising and Marketing curriculum.

Gamma Beta Phi Honor Society is a national honor and service organization which emphasizes service, character, and scholarship. Memberships, based on a 3.50 grade point average and completion of 15 quarter hours, are extended twice a year.

Phi Beta Lamda Business Club is comprised of students in the business curriculums.

Slightly Off Center Stage Players is made up of those students interested in dramatic productions.

Black Awareness Club promotes knowledge and appreciation of black history.

Data Processing Management Association - Student Chapter benefits the electronic data processing student in extracurricular activities not available in the classroom or lab.

Criminal Justice Club promotes a better understanding of the criminal justice system through service and education and bridges the gap between the community and the system.

Media in Motion Club fosters interest and enthusiasm in the field of Communications Technology by providing professional and educational activities for its members.

STUDENT PUBLICATIONS

1. Student Newspaper - The “Tiger Paw” is published 10 months each year. This paper is published by and for the students at CTC.
2. Annual - The school annual, “The Bridge”, is published yearly by the students. Any interested student as well as journalism students are invited and encouraged to participate.
3. Student Handbook - The student handbook is published annually as a service to the student body.
4. Paw Prints - The student newsletter is published bimonthly. This letter publishes articles of interest to students.

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association at CTC takes an active part in life at school. The purpose of this organization is:

1. To represent the individual thinking, the integrity, the ideas, and the interests of the students within Cleveland Technical College.
2. To encourage cooperation between students, faculty, and administration.
3. To sponsor activities or endeavors that will be of benefit to the student body and Cleveland Technical College.
4. To do all things necessary to promote the welfare of the student body.

Members of the CTC SGA attend the North Carolina Comprehensive Community College Student Government Association meetings. This enables students to meet new people and exchange ideas from different schools for the enhancement of their respective organizations.

STUDENT CONDUCT

Self-discipline is an essential element of individual growth and development. Accordingly, students are expected to display the qualities of courtesy and integrity that characterize the behavior of mature ladies and gentlemen.

It is expected that students will be governed by such rules and regulations as may be established by the College.

The College does not permit the use or possession of alcoholic beverages or narcotics in any form on the campus or at College sponsored functions. Violations of rules and regulations may subject the student to disciplinary measures or dismissal.

DUE PROCESS PROCEDURES ON GRIEVANCES

1. A student wishing to appeal any decision at the College should first appeal the decision to the instructor or administrator making the decision.
2. If not satisfied, an appeal may be made in writing to the Due Process Committee which will recommend action to the President. The Executive Vice-President of the College serves as Chairman of the Due Process Committee.
3. Further appeal may be made directly to the President in writing.
4. Final appeal would be made directly to the Board of Trustees in writing. The Board will make a decision based on the written appeal and the forwarded recommendations of the President and Due Process Committee.

COOPERATIVE EDUCATION

Cooperative Education (Co-op) is designed to give students enrolled in many programs within the college a chance to work on a job while completing their degrees. This combination of classroom instruction with practical/related work experience provides numerous benefits to participating students.

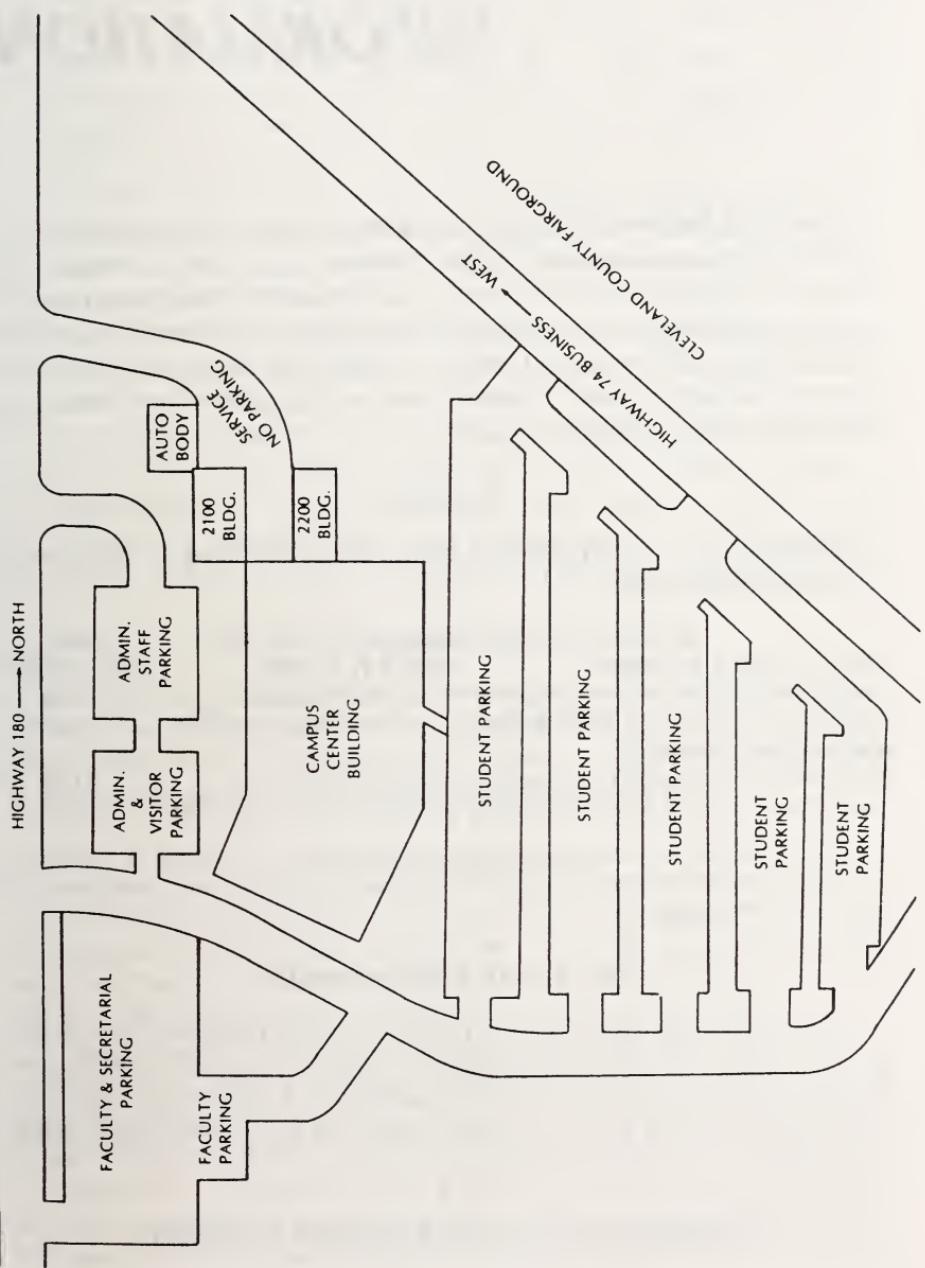
Co-op students work from two to six quarters in part-time or full-time jobs with employers selected and/or approved by the college. Academic credit is given for the learning gained during the work period. Students are contacted periodically by an instructor coordinator, and receive on-the-job supervision by the employers.

ELIGIBILITY. Any full-time students who are enrolled in programs offering Co-op for academic credit and who have earned a minimum of 12 hours toward their degree requirements are eligible to participate, if they meet the following conditions:

- (1) Approval of instructor coordinator
- (2) Have a minimum of 2.0 GPA
- (3) Approval from program director

ACADEMIC CREDIT. Credit hours for Cooperative Education work periods are determined by dividing the average number of hours worked per week by 10 and rounding to the nearest whole number. Co-op students may earn from two to twelve quarter hours of Co-op credit toward their degree requirements. (See individual curriculum programs for number of elective hours available.)





FINANCIAL INFORMATION

Cleveland Technical College operates on the quarter system. Each quarter is eleven weeks in length. Students pursuing a program of study are required to register and pay all fees at the beginning of each quarter. A student is not registered until tuition and fees are paid in the Business Office. Every effort is made to keep the student's expenses at a minimum. Tuition cost is set by the State Board of Education and is subject to change.

TUITION

Current rates for all general education, technical or vocational curriculum students:*

	Effective	After
	Until July 1, 1987	July 1, 1987
North Carolina Students:		
Full-time (12 or more credit hours)	\$ 66.00 per quarter	75.00
Part-time (less than 12 credit hours)	\$ 5.50 per qtr. credit hr.	6.25
Out-of-State Students:		
Full-time (12 or more credit hours)	\$504.00 per quarter	702.00
Part-time (less than 12 credit hours)	\$ 42.00 per qtr. credit hr.	58.50

*Tuition and fees are waived by the State for persons 65 of age or older. If accident insurance were desired these persons would need to purchase this at the current rate.

FINANCIAL RESPONSIBILITY

Students are not permitted to default in the payment of fees, fines, loans, or other financial obligations due the school. All tuition, fees, and any other expenses must be paid prior to entering class. Any deviation from this policy must be approved by the President of the College.

RESIDENCE STATUS FOR TUITION PAYMENT

1. General Statute 116-143.1 (b) passed by the 1973 General Assembly of North Carolina reads:

"To qualify for in-state tuition a legal resident must have maintained his domicile in North Carolina for at least 12 months immediately prior to his classification as a resident for tuition purposes. In order to be eligible for such classification, the

individual must establish that his or her presence in the State during such twelve-month period was for purposes of maintaining a bona fide domicile rather than for purposes of mere temporary residence incident to enrollment in an institution of higher education; further, (1) if the parents (or court-appointed legal guardian) of the individual seeking resident classification are (is) bona fide domiciliaries of this State, this fact shall be *prima facie* evidence of domiciliary status of the individual applicant and (2) if such parents or guardian are not bona fide domiciliaries of this State, this fact shall be *prima facie* evidence of non-domiciliary status of the individual."

2. Regulations concerning the classification of students by residence for purposes of applicable tuition differentials, are set forth in detail in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes*. Each enrolled student is responsible for the contents of that Manual, which is the controlling administrative statement of policy on this subject. Copies of the Manual are available on request at Student Services.

BOOKS, SUPPLIES, AND BOOKSTORE

A student is required to buy the necessary textbooks and supplies. An average cost of books will vary from \$30 to \$100 per quarter, depending on the curriculum and number of courses taken. Books and supplies are sold during regular bookstore hours.

STUDENT INSURANCE

Certain risks are inherent in any work involving regular contact with mechanical and electrical equipment. While stringent precautions will be taken to insure safety, it is felt to be in the interest of all students to provide some measure of insurance protection.

A group policy, providing the desired insurance protection, is available through the Business Office. The cost of the insurance is approximately \$3.50 per year. If you are not already covered by accident insurance we strongly recommend this policy to you.

Any accident, regardless of how minor it may be, must be reported to the instructor in the area. The policy is limited in coverage, both in the time period covered and the amounts provided for each accident. Information concerning the policy and coverage is distributed during each registration period and is also available in Student Services. Claims for accidents should be turned in at Student Services.

Personal liability insurance is required of all Practical Nursing and Radiologic Technology students. The cost of the coverage is \$10.50 per year.

GRADUATION FEE

All students eligible to graduate from a curriculum program will be required to pay a graduation fee (approximately \$22.00) one month prior to the time they are to complete their programs. The fee covers the cost of graduation (cap and gown, diploma or degree with case).

STUDENT ACTIVITY FEE

All students enrolled for seven or more credit hours are required to pay a student activity fee of \$8.00 each Fall, Winter, Spring quarter. Students enrolled for less than seven credit hours will pay a student activity fee of \$4.00 each quarter. All summer quarter students will pay a \$4.00 student activity fee. The Student Government Association budgets this money yearly with the approval of the Administration. Included in the budgeting are the following items: The Tiger Paw, The Bridge, men's and women's athletics, intramurals, fall, spring, and summer festivals, SGA dues and conventions, ID cards, parking stickers, and other student related activities.

CHARGE FOR RETURNED BANK CHECKS

There will be a charge of \$5.00 assessed any student who gives the College a bank check which is returned from the bank because of insufficient funds.

REFUND POLICY

Tuition refunds may be authorized only in the event that the student must withdraw for unavoidable reasons. In such cases, two-thirds of the tuition paid may be refunded if the student withdraws within ten days after the first day of classes as published in the Calendar of Events. Tuition refunds will not be considered after that time.

Tuition refunds will not be made for tuition of \$5.00 or less. Refunds will not be made to students enrolled in short-term, non-credit classes, activity fees, or for accident insurance fees. Full refund will be made should the College cancel a class or program. Refund Checks are normally issued within three weeks after the close of late registration.

PARKING (MOTOR VEHICLE AND TRAFFIC REGULATIONS FOR CLEVELAND TECHNICAL COLLEGE)

I. General Information

The control and enforcement of motor vehicle conduct is necessary both for the safety of the individual and the efficient operation of Cleveland Technical College.

- A. In the following information the term campus shall refer to that property operated by Cleveland Technical College and those other properties when used by CTC for educational purposes.
- B. The term motor vehicle shall include all vehicles which are covered by the motor laws of North Carolina.
- C. No student may receive end-of-quarter grades until receiving clearance from the Campus Security Committee and paying all fines.
- D. Student parking is in the large lot on the fairground side of the campus.

II. Registration of Vehicles

- A. All faculty, staff and students, part-time and full-time, shall be required to have their vehicle or vehicles registered by the business office and to affix an appropriate decal on the driver's side of the rear bumper. There shall be no charge to register vehicles.
- B. Campus visitors, law enforcement vehicles, and service vehicles are specifically exempted from registering their vehicles. However they are expected to obey all other regulations.

III. Regulations

- A. It shall be the responsibility of the Campus Security Committee to recommend traffic regulations to the President of the College for presentation to the Board of Trustees for approval.
- B. Enforcement of regulations shall be administered by the Campus Security Committee.
- C. Those students assessed fines shall pay those to the Campus Business Office (For redress, see part IV.)
- D. The following shall be considered violations of campus motor vehicle regulations and the corresponding fine:

1. Vehicle showing no registration	\$5.00
2. Parking in improper area	3.00
3. Parking by backing vehicle into area	1.00
4. Double parking or blocking a legally parked vehicle	3.00
5. Speeding in excess of 10 mph	3.00
6. Failure to yield right-of-way to pedestrian	3.00
7. Reckless driving	5.00

- E. This College reserves the right to remove any illegally parked vehicle by a College vehicle, privately owned wrecker, or other means. The violator shall be responsible for any tow charge in addition to the violation fee.
- F. The registered operator is responsible for the use of the vehicle.

IV. Redress

- A. A committee shall be made to exist which will be known as the Campus Safety and Traffic Committee.
- B. It shall be the responsibility of this committee to determine final disposition of fines for which anyone may feel that he/she was unnecessarily charged.
- C. This committee shall be composed of the following:
 1. One member of the Campus Security Committee, not the chairman.
 2. One member of the Campus Safety Committee, not the chairman.
 3. One member of the Student Government Association, not the president.
- V. The Campus Security Committee shall have power to recommend changes in the above regulations provided the change is properly communicated to the administration, faculty, staff, and students of Cleveland Technical College.

FINANCIAL AID INFORMATION

The fundamental purpose of the financial aid program at Cleveland Technical College is to provide financial assistance, based on financial need, to students who normally could not attend post-secondary school without aid. Financial aid at Cleveland Tech is based on a needs analysis.

The student should complete the need analysis form - Family Financial Statement (FFS), and mail it to American College Testing (ACT) for calculation of eligibility.

Based on the belief that post-secondary education should not be a privilege reserved only for those who have the personal or family resources to afford it, these policies are adopted for CTC's Financial Aid Program:

—Financial aid at Cleveland Tech consists of scholarships, grants, loans, work study or any combination of these as determined by the financial aid office.

- The family of the student or the student has the primary responsibility for post-secondary educational cost. Financial aid awarded by the College is based on the need of the student to supplement the family or student contributions.
- Students receiving financial aid who withdraw from the College must personally notify the Financial Aid Office of this action. Also, any changes in name, marital status, address, academic program, or enrollment status must be reported to the Financial Aid Office.
- The primary purpose of financial aid is to assist the student in receiving an education. To be assured of continued financial aid, students must maintain satisfactory progress as defined in this catalog under "satisfactory progress".
- Any commitment of federal funds (Pell Grant, SEOG, CWS, NCSIG) is tentative and contingent upon subsequent congressional appropriation and actual receipt of funds by Cleveland Technical College.
- The Financial Aid Office reserves the right, on behalf of the College, to review and adjust or cancel an award anytime there is indication of changes in financial status, academic program, good academic standing, or failure to observe reasonable standards of conduct.
- Recipients of financial aid from the College are to notify the Financial Aid Office of any other financial aid extended to them from sources outside the College prior to acceptance of outside aid.
- Most Student aid is based on full-time enrollment. Twelve (12) credit hours are required for full-time status; 9-11 credit hours for 3/4 time status, and 6-8 credit hours for 1/2 time status. No student aid is normally paid for less than 1/2 time enrollment.

APPLICATION PROCESS

All applicants for financial aid at Cleveland Technical College shall have completed and mailed to American College Testing (ACT) the Family Financial Statement (FFS) or the other standard need analysis document approved by CTC. All students shall apply for a PELL (Basic) Grant if they wish to be considered for other federal, state, or institutional financial aid that is based on need. Students are encouraged to complete the application process as soon as income taxes and reports are filed or the source of income has been verified. In addition to verification of income, whether taxable or non-taxable, students may be requested to verify or document federal income taxes paid, number in household, number attending post-secondary

institutions, and independent student status. Students should mail the FFS on or before the first of July to insure completion of the application process prior to the first of September. Students completing and mailing the FFS needs analysis applications on the day of registration are not awarded their grant until the application process is complete.

SATISFACTORY PROGRESS STANDARDS FOR FINANCIAL AID

Introduction

The Higher Education Act of 1965, as amended by Congress in 1980, mandates institutions of higher education to establish minimum standards of "satisfactory progress" for students receiving financial aid. For the purpose of maintaining a consistent policy for all students receiving financial aid administered by the college's Financial Aid Office, these standards are applicable to all financial aid programs, including all Federally sponsored Title IV programs.

Satisfactory Progress Defined

To continue to receive financial aid, a student must demonstrate satisfactory progress as defined below.

- 1) Satisfactory progress for Financial Aid at CTC is defined as any student in good academic standing, not on academic probation, and who has completed one-half (1½) or more of the work registered for the previous quarter.
- 2) Continuing students applying for financial assistance (Title IV funds which include PELL Grant, Supplemental Educational Opportunity Grant, College Work-Study, Guaranteed Student Loan, Plus Loan, and State Student Incentive Grant) will be evaluated each fall quarter to determine, by the Standards of Satisfactory Progress, whether the student has successfully completed the minimum percentage of work toward his/her objective, degree, or certificate. Other students entering during the same academic year mentioned above will be evaluated by the FAO the entering quarter.
- 3) The maximum time frame a full-time student would have to complete his/her course should be:
 - 3 years or 12 quarters for technical and general education programs
 - 1½ years or 6 quarters for vocational programs.A half-time or three quarter student must satisfactorily complete the appropriate fraction of maximum hours established for completion of his/her course work.

Students who change from one curriculum program to another are subject to the maximum time frame mentioned in the above paragraph.

- 4) Students registered under the Special Credit Program are NOT eligible for the Title IV Program.

If a curriculum student is placed on academic probation or suspension for the first time and applies for admission as a "new" student in another program, the financial aid award is terminated. The student may reestablish eligibility for the federal student aid funds after attending one or more quarters and removing the academic probation, or attend one quarter with good standing in a new program when suspended.

Re-entry status is determined by internal evaluation and transfer of credit. After the re-entry quarter, the first definition of satisfactory progress applies.

TYPES OF FINANCIAL ASSISTANCE

All financial aid programs fall into one of three categories: grants, loans, or employment. Grants are outright gifts of money and do not have to be repaid. Scholarships are also considered gift aids. Loans are borrowed monies which you must repay with interest. Employment allows you to work and earn the money you need.

The different programs which come under these categories are listed below. The application procedures and the eligibility requirements, as stated in the academic bulletin, apply for any program. Students having a 4-year degree may apply for any program except Pell Grant and SEOG.

GRANTS

Pell Grant

All financial aid applicants are required to apply for the Pell Grant. The Pell Grant is a federal student aid entitlement program which provides a foundation of financial assistance to which other forms of aid may be added. Awards at Cleveland Technical College range from approximately \$150 - \$2100 a year (including dependent/self-supporting and in-state/out-of-state residents).

The U. S. Department of Education determines the eligibility based on a formula developed annually and reviewed by Congress. This formula is applied consistently to all applicants and takes into account income, assets, family size, etc. The formula uses the information provided on the application to produce an eligibility index number.

This number will appear on a Student Aid Report (SAR) which will be mailed directly to your home approximately 4 to 6 weeks after submitting the application. When you receive your SAR, bring it immediately to the Financial Aid Office (FAO).

Supplemental Education Opportunity Grant (SEOG)

The SEOG is a federal program; however, it is not an entitlement program like the Pell Grant. Recipients are determined by the Director of Financial Aid according to need and is primarily for students with exceptional needs.

A SEOG could range from \$200 to \$2000 according to the family income and their ability to assist the student. CTC's average award is \$300.

Job Training Partnership Act (JTPA)

This is a federally funded, skill development program for economically disadvantaged students. Application and recipient selection is processed through the Job Placement Office on campus.

North Carolina Student Incentive Grant (NCSIG)

Legal residents of North Carolina who are accepted for enrollment or are enrolled on a full-time basis may apply for a Student Incentive Grant. Students must demonstrate substantial financial need based on the ACT Family Financial Statement. NCSIG awards may not exceed one half of a student's unmet need, or \$2000 per academic year, whichever is less.

To be considered for the NCSIG applicants should mail the FFS to ACT prior to March 1 preceding the award year.

EMPLOYMENT

College Work-Study

College Work-Study is a federal program which provides jobs on campus for students who need financial aid and who must earn part of their educational expenses. Students should indicate on their FFS if they would like consideration for this program. In arranging a job, the following is considered: the student's need for financial assistance, class schedule, and academic progress. The salary is based on the current minimum wage. The Work-Study award is established by the FAO at a limit that cannot be exceeded. Once the student has earned the total amount of the award, he/she cannot continue to be employed under Work-Study for that academic year.

CTC SCHOLARSHIP PROGRAMS

NC Rehabilitation Association Scholarship Program - The purpose of this program is to promote professional excellence in Rehabilitation through the granting of a scholarship(s) to the student(s) in Rehabilitation who best demonstrates his/her potential to contribute to the advancement of Rehabilitation in the State of North Carolina.

NC Sheriff's Association Undergraduate Criminal Justice Scholarship Program - The NC Sheriff's Association has established a scholarship program for students enrolled in curriculum programs in Criminal Justice, Juvenile Justice, Correction Service or Police Science.

NC Community College Scholarship Program - To qualify as a candidate for these scholarships, a person would have to meet the established criteria. A copy of the eligibility criteria is available in the FAO. Applications must be submitted to the FAO and selection is determined by interview before the scholarship committee.

The Wachovia Technical Scholarship is awarded annually to two students who are enrolled full-time in the second year of a technical curriculum and is based on need and scholastic promise.

The Southern Bell Scholarship is awarded annually to two NC resident students who are enrolled full-time in a course of study leading to a degree or diploma. The recipient must maintain academic progress and continue enrollment at CTC. Financial need receives top priority with job obsolescence considered secondly.

Memorial Scholarships

The Clyde Cash Memorial Scholarship Fund established December, 1981 in memory of Clyde Cash, Chemistry instructor, provides annual scholarship awards to graduating seniors from Cleveland County High Schools.

The Robert Hoover Memorial Scholarship Fund established June, 1982 in memory of Bob Hoover, English instructor, provides annual scholarship awards to graduating seniors from Cleveland County High Schools.

The Ruth Anthony Memorial Scholarship established May, 1984, in memory of Ruth Anthony, professional business-woman for Fields Young, Inc., provides an annual scholarship to a person applying for admission to a secretarial/science curriculum at Cleveland Technical College. The recipient must exhibit the desire and ability to be the best professional secretary possible. The Selection Committee will select the recipient based on need, interest, and aptitude. Applications must be submitted to the FAO by April 1.

Violet Thomas Memorial Scholarship is a limited scholarship - partial funding for drama student(s). Awards are made by the Dean of Arts, Science, and Public Services.

Gamma Beta Phi Scholarship - The Gamma Beta Phi offers a scholarship of \$100 per quarter to a worthy student. Students interested in applying for this scholarship should do so at the FAO.

Vocational Rehabilitation - Students with mental, physical or emotional handicaps which limit employment opportunities may be eligible. For information, students should contact the nearest Vocational Rehabilitation Services, Shelby, NC 28150.

North Carolina National Guard Tuition Assistance Program (NCNG)

- The NC General Assembly has provided a state funded Tuition Assistance Program for members of the NC National Guard (NCNG). Assistance is available to active NCNG members who successfully participate in unit training and have a minimum of two years remaining as a member of the guard from the end of the academic period for which tuition assistance is provided. Extension of enlistment may be necessary. Up to \$500 per year is available for tuition and it is subject to annual renewal for a maximum of four years. Applications are available at guard units and the Office of the Adjutant General, P.O. Drawer 2628, Raleigh, NC 27611.

Other Scholarships - Other scholarships from various community clubs and organizations are providing funds periodically. When available, these funds are awarded to students on a need basis. Applicants must follow normal procedures of applying for Financial Aid.

Veterans Programs

Veterans and War Orphans Grants - These grants are available to immediate family members of deceased or disabled veterans (service connected). Families of POW's and MIA's classified as such for ninety days are eligible. Students should contact: Division of Veterans Affairs, P.O. Box 26206, Raleigh, NC 27611.

Veterans Benefits - Cleveland Technical College is approved for eligible veterans and wives, widows and children of disabled or deceased veterans. Applications may be obtained at the CTC Veterans Office or the nearest county Veterans Office.

NORTH CAROLINA RESERVIST BENEFITS

- State Tuition Assistance Program (\$500 per year) - a maximum of \$2,000 can be used by the reservists for tuition and fees.
- \$140 per month as a full-time student
- \$105 per month as a three-quarter time student
- \$70 per month as a half-time student
- The maximum benefit period is 36 months based on full-time status, or 48 months based on three-quarter time status, or 72 months based on half-time status, or any combination with a maximum benefit of \$5,040. No payment is made for less than half-time status.

Other Sources

- American Business Women's Club Scholarships
- Cleveland County Negro Women's Club Scholarships
- Cleveland County Nurses Auxiliary Scholarship

Students interested in the above should contact the appropriate agency. The Financial Aid Office assists in directing students to these agencies.

Scholarship recipients are expected to be full-time students. Students selected for scholarships who withdraw/drop courses must notify the FAO. The reason for withdrawing/dropping courses will be evaluated to see if the scholarship should be forfeited. Replacement for the scholarship is at the discretion of the FAO. This recipient will be selected from the pool of candidates interviewed for the original scholarships.

LOANS

NC Insured Student Loan

To be eligible to apply, a student must be a resident of North Carolina, enrolled or accepted for enrollment on at least a half-time basis. An undergraduate student may borrow \$2,500 a year, not to exceed the cost of education, except a first-year student may borrow up to \$2,500 a year not to exceed one-half the cost of education.

If the adjusted gross income of the student's family is more than \$30,000 the borrower will have to demonstrate need in order to qualify for the federal interest benefits.

The annual percentage rate on the loan is nine percent. An insurance fee of up to 1% and a 5% origination fee are deducted from the loan check.

A grace period of 6 months is allowed after half-time enrollment ceases and before repayment begins.

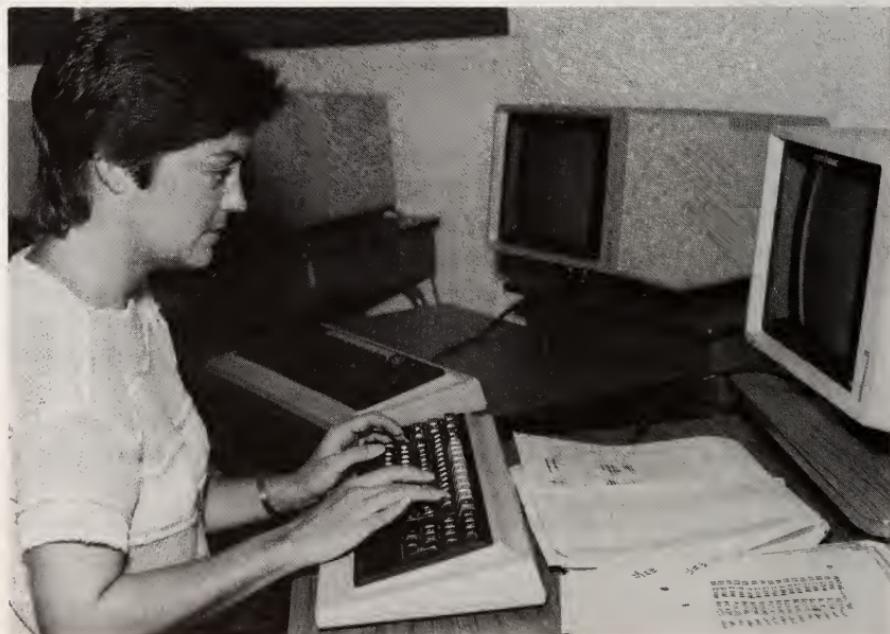
The North Carolina Insured Student Loan application is available in the Financial Aid Office. The FFS must be filed along with documentation of the previous year's income, taxable and non-taxable, for verification purposes.

USA FUNDS. Non-resident student applications for guaranteed student loans are made through Wachovia Bank and Trust, using the USA FUNDS application and promissory note. These applications may be obtained from the Financial Aid Office. The same FFS and income documentation requirements mentioned above in NCISL are needed for USA FUNDS.

The procedures and policies governing the disbursement/repayment of these loans are the same as NCISL.

The NC Student Loan Program for Health, Science, and Mathematics - The purpose of this loan program is to provide financial assistance to and encourage North Carolinians who desire to pursue career opportunities in the health, science, and mathematics disciplines. The General Assembly makes available appropriations for loans for the instructional programs of Radiologic Technology, Business Computer Programming, and Electronic Engineering Technology at Cleveland Technical College.

NC Vocational Technical Student Loan Program - This loan program established April, 1984, makes funds available for loans to students enrolled in the vocational and technical curriculums. A student may borrow a maximum of \$300 each academic year under the program.



DEGREE CREDIT PROGRAMS



GENERAL EDUCATION AND COMMUNICATIONS DEPARTMENT

ASSOCIATE IN GENERAL EDUCATION DEGREE (G—020)

PURPOSE OF CURRICULUM

The General Education curriculum has two main purposes. One is to provide the student with two years of general education and interest type course work culminating in an Associate Degree in General Education. The second purpose is to provide the student with freshman and sophomore level course work that will be transferable to many colleges and universities. The College will have on file agreements with institutions concerning transferability. If the student is interested in transferring to a different institution from one of these, the student should contact the admissions office of the college in question to determine possible transfer status. Transfer credit is always a prerogative of the receiving institution. If transfer of credit is the student's purpose, the student and an advisor should outline a program of study to correspond to the requirements of the college of interest.

Courses included in the General Education curriculum are those which are usually the entire requirements of the freshman and sophomore program in four-year colleges of arts and sciences (exclusive of foreign languages required by some colleges).

ADMISSION REQUIREMENTS

The minimum admission requirement is high school graduation or its equivalent. Students who do not meet all academic requirements may be granted provisional admission for one quarter, after which they must either have met entrance requirements or be classified as non-degree students. The College offers an Adult High School Diploma Program and administers the High School Equivalency Examination (GED).

THE CURRICULUM

The required courses in the curriculum are selected to provide the basic general education requirements of liberal arts programs and to meet basic needs for successful progress toward program objectives. Electives should be chosen in accordance with student interests and ultimate objectives. Students may wish to place heavy emphasis on courses in business, technical, or social science areas, depending on their educational or occupational plans.

The general education program is designed for the student who is basically interested in two years of education beyond the high school. This program provides a basic core of course work in the following areas:

English and Literature	12	Quarter Hours
Fine Arts.....	8	Quarter Hours
Social Science and History.....	24	Quarter Hours
Science and Mathematics	20	Quarter Hours

This introduction into the broad fields of knowledge permits the student to explore self and clarify life goals. With this background one is able to intelligently choose additional course work in terms of interests and social needs.

When the student has completed basic general education requirements and accumulated electives to a total of 96 quarter hours, an Associate in General Education Degree will be granted.

REQUIRED COURSES FOR GRADUATION (64 Quarter Hours)

Course Title			Hours Per Week	Credit	
			Class	Lab	Hours
English and Literature (12 Quarter Hours)					
ENG 101	English Grammar and Composition I		4	0	4
ENG 102	English Grammar and Composition II		4	0	4
Select one of the following:					
ENG 105	Masterpieces of World Literature		4	0	4
ENG 205	Major American Writers		4	0	4
ENG 207	Southern American Writers		4	0	4
Fine Arts (8 Quarter Hours)					
Select two of the following:					
ART 101	Art Appreciation		4	0	4
ART 205	Film Appreciation		4	0	4
ENG 107	Theatre Appreciation		4	0	4
MUS 101	Music Appreciation		4	0	4
Social Science and History (24 Quarter Hours)					
PSY 101	Introduction to Psychology		4	0	4
SOC 101	Introduction to Sociology		4	0	4

Select one three course sequence from the following:

HIS 101	World Civilization I	4	0	4
HIS 102	World Civilization II	4	0	4
HIS 103	World Civilization III	4	0	4
HIS 110	American History I	4	0	4
HIS 111	American History II	4	0	4
HIS 112	American History III	4	0	4

Select one of the following:

HUM 101	Dimensions of Human Experience	4	0	4
HUM 103	Major World Religions	4	0	4

Science and Mathematics (20 Quarter Hours)

MAT 101	Principles of Mathematics	4	0	4
MAT 102	Algebra I	4	0	4

Select one three course sequence from the following:

BIO 101	Biology I	3	2	4
BIO 102	Biology II	3	2	4
BIO 103	Biology III	3	2	4
CHM 101	Chemistry I	3	2	4
CHM 102	Chemistry II	3	2	4
CHM 103	Chemistry III	3	2	4
PHY 201	Physics I	3	2	4
PHY 202	Physics II	3	2	4
PHY 203	Physics III	3	2	4

NOTE: Courses not chosen as required may be selected as electives.

Total Credit Hours Required Courses	64
Elective Hours	<u>32</u>
Total Credit Hours Required to Graduate	96

Electives Recommended For Transferability:

ART 102	Beginning Drawing	3	2	4
ART 103	American Art History	4	0	4
ART 202	Advanced Drawing	3	2	4
ART 203	Painting Seminar	3	2	4
AVM 100	Introduction to Television and Cable Production	4	0	4
BIO 201	Zoology	3	2	4
BIO 202	Botany	3	2	4
CAT 116	Photography I	3	2	4
CAT 117	Photography II	3	2	4
CAT 119	Photography III	3	2	4
CJC 103	The Art of Self Defense	4	0	4
DRA 105	Theatrical Performance	4	0	4
DRA 106	Dramatic Productions	4	0	4
EDP 101	Introduction to Data Processing	4	0	4
EDP 106	Word Processing I	4	0	4
ENG 100	Basic English Skills	4	0	4
ENG 104	Reading Dynamics	4	0	4
ENG 116	Journalism I	4	0	4
ENG 117	Journalism II	4	0	4
ENG 118	Publications Design and Production I	3	2	4

ENG	119	Publications Design and Production II	3	2	4
ENG	120	Publications Design and Production III	3	2	4
ENG	121	Publications Design and Production IV	3	2	4
ENG	133	Composition and Documentation	4	0	4
ENG	201	The History of the English Language	4	0	4
ENG	203	Creative Writing	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
ENG	206	Voice and Diction	4	0	4
ENG	209	Creative Writing Workshop	4	0	4
ENG	210	Effective Communication	2	0	2
ENG	220	Reading in the Content Areas	2	0	2
MAT	100	Basic Arithmetic Skills	4	0	4
MAT	117	Introduction to Statistics	4	0	4
MAT	131	Algebra II	4	0	4
MAT	132	Trigonometry	4	0	4
MAT	134	Algebra III	4	0	4
MAT	201	Differential Calculus	4	0	4
MAT	202	Calculus and Analytical Geometry	4	0	4
MAT	203	Integral Calculus	4	0	4
MAT	210	College Math for Teachers	2	0	2
MUS	100	Voice	4	0	4
MUS	201	Music of the Twentieth Century	4	0	4
MUS	202	Musical Theater	4	0	4
MUS	203	Modern Dance	3	2	4
PHI	101	Introduction to Philosophy	4	0	4
POL	204	Great Decisions—Foreign Policy	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
PSY	202	Group Processes	4	0	4
PSY	208	Human Growth and Development	4	0	4
PSY	209	Living with the 10-15 Year Old	2	0	2
SOC	202	Marriage and Family	4	0	4
SOC	203	Contemporary Issues	4	0	4
SOC	208	Black Studies	4	0	4

OTHER ELECTIVES: Any course from the Associate in Applied Science degree curriculums, with approval of department head. Check for transferability.

ASSOCIATE IN APPLIED SCIENCE DEGREE

COMMUNICATIONS TECHNOLOGY (T-154)

The Communications Technology curriculum prepares individuals to enter the communications field in industry or education. Students will acquire technical and professional experiences in various aspects of media production.

Graduates may be employed as media technicians by industrial education departments, libraries, public schools, community colleges, universities, medical centers or other educational facilities. The program will provide students with a broad range of skills from which they may choose to specialize. Technicians may have duties including photography, graphic art, producing, directing, equipment maintenance and others.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
			Class	Lab	Credit
AVM	100	Introduction to Television and Cable Production	4	0	4
AVM	101	Advanced Television and Cable Production	4	2	5
AVM	102	Introduction to AV Equipment and Basic Production	3	2	4
AVM	200	Media Production I	3	2	4
AVM	201	Media Production Lab Project	0	10	5
AVM	202	Media Production II	3	2	4
AVM	203	Media Production III	3	2	4
AVM	204	Selective Media	3	2	4
AVM	205	Equipment Repair	2	4	4
AVM	206	Lighting and Sound	2	2	3
CAT	116	Photography I	3	2	4
CAT	117	Photography II	3	2	4
CAT	118	Basic Film Technology	3	2	4
			36	34	53

RELATED COURSES:

ART	102	Beginning Drawing	3	2	4
ART	205	Film Appreciation	4	0	4
BUS	204	Business Communications	4	0	4
DRA	105	Theatrical Performance	4	0	4
EDP	101	Introduction to Data Processing I	4	0	4
ELN	100	Introduction to Electronics	4	0	4
MAT	101	Principles of Math	4	0	4
			27	2	28

GENERAL EDUCATION:

ENG 101	Grammar & Composition I	4	0	4
ENG 102	Grammar & Composition II	4	0	4
ENG 105	Masterpieces of World Literature	4	0	4
PHI 101	Intro to Philosophy	4	0	4
Select one of the two listed below:				
SOC 101	Intro to Sociology	4	0	4
HUM 103C	Major World Religions	4	0	4
		20	0	20

WORK EXPERIENCE: (Student may substitute electives)

4

ELECTIVES:

0

Total hours required for graduation = 105



BUSINESS, ACCOUNTING AND MANAGEMENT

ASSOCIATE IN APPLIED SCIENCE DEGREES

ACCOUNTING (T-016)

The purpose of the Accounting curriculum is to prepare the individual to enter the accounting profession through study of accounting principles, theories and practices with related study in law, finance, management and data processing operations.

The curriculum is designed to prepare the individual for entry-level accounting positions, such as junior accountant, bookkeeper, accounting clerk, cost clerk, payroll clerk and related data processing occupations.

With experience and additional education, the individual will be able to advance to positions such as systems accountant, cost accountant, budget accountant and property accountant.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
		Title	Class	Lab	Credit
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	123	Business Finance I	4	0	4
BUS	124	Business Finance II	4	0	4
BUS	222	Accounting III	4	4	6
BUS	223	Intermediate Accounting I	4	4	6
BUS	224	Intermediate Accounting II	4	4	6
BUS	225	Cost Accounting I	2	2	3
BUS	226	Cost Accounting II	2	2	3
BUS	229	Taxes I	4	0	4
BUS	230	Taxes II	4	0	4
BUS	269	Auditing I	3	0	3
EDP	240	Computer Augmented Accounting	3	2	4
			<u>46</u>	<u>26</u>	<u>59</u>

RELATED COURSES:

BUS	101	Intro to Business	4	0	4
BUS	109	Business Mathematics I	4	0	4
BUS	111	Business Mathematics II	4	0	4
BUS	115	Business Law I	4	0	4
BUS	116	Business Law II	4	0	4
BUS	219	Credit Procedures and Problems	4	0	4
BUS	235	Business Management	4	0	4
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
			<hr/>	<hr/>	<hr/>
			36	0	36

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4

Select 6 more hours from any course with a prefix of: ENG, ART,

PHY, SOC, CHM, MAT, PSY, BIO, DRA, MUS, POL

<hr/>	6	<hr/>	0	<hr/>	6
18		0		18	

WORK EXPERIENCE: (Student may substitute electives) 4

ELECTIVES: 0

Total hours required for graduation = 117

BUSINESS ADMINISTRATION (T-018)

The Business Administration curriculum is designed to prepare an individual for entry into middle-management occupations in various businesses and industries. The curriculum provides an overview of the business and industrial world—its organization and management.

The purpose of the curriculum will be fulfilled through courses designed to develop competency in: (1) understanding the principles of organization and management in business operations, (2) utilizing modern techniques to make decisions, (3) understanding the economy through study and analysis of the role of production and marketing, (4) communicating orally and in writing and (5) interpersonal relationships.

Through these skills and through development of personal competencies and qualities, the individual will be able to function effectively in middle-management activities in business or industry.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

BUS	101	Title	Hours		
			Class	Lab	Credit
BUS	102	Introduction to Business	4	0	4
BUS	115	Typing I	2	2	3
BUS	123	Business Law I	4	0	4
BUS	124	Business Finance I	4	0	4
BUS	204	Business Finance II	4	0	4
BUS	219	Business Communications	4	0	4
BUS	229	Credit Procedures and Problems	4	0	4
BUS	229	Taxes I	4	0	4
BUS	230	Taxes II	4	0	4
BUS	233	Personnel Management	4	0	4
BUS	235	Business Management	4	0	4

Select *all* of the following courses:

BUS	162	Fundamentals of Real Estate I	6	0	6
BUS	164	Real Estate Law	3	0	3
BUS	209	Real Estate Finance	3	0	3
BUS	234	Real Estate Sales and Brokerage	3	0	3

OR

Select *all* of the following courses:

BUS	109	Business Mathematics I	4	0	4
BUS	111	Business Mathematics II	4	0	4
BUS	116	Business Law II	4	0	4
BUS	239	Marketing	4	0	4
			58 or	2	59 or
			59		58

RELATED COURSES:

BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	222	Accounting III	4	4	6
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
EDP	101	Introduction to Data Processing I	4	0	4
EDP	240	Computer Augmented Accounting	3	2	4
			27	14	34

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4

Select six more hours from any course with a prefix of: ENG,

ART, PHY, SOC, CHM, MAT, PSY, BIO, DRA, MUS, POL

6	0	6
18	0	18

WORK EXPERIENCE/ELECTIVES:

8

Total hours required for graduation = 118 or 119

INDUSTRIAL MANAGEMENT (T-049)

The Industrial Management curriculum is designed to provide an individual with the ability to function effectively in supervisory and middle-management positions in industry. This program emphasizes study and application in areas such as business and industrial management, production methods and schedules, inventory control, work analysis, motivation techniques and human relations.

This curriculum is designed to prepare the individual to enter supervisory or middle-management positions, to provide an educational program for upgrading or retraining, and to provide an opportunity for the individual wanting to fulfill professional or general interest needs.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
		Title	Class	Lab	Credit
ECO	201	Labor Economics	4	0	4
EDP	106	Word Processing I	3	2	4
ENV	206	Environmental Law	4	0	4
ISC	107	OSHA	4	0	4
ISC	120	Principles of Industrial Management I	4	0	4
ISC	121	Principles of Industrial Management II	4	0	4
ISC	122	Industrial Drawing	4	0	4
ISC	209	Plant Layout	4	0	4
ISC	211	Work Measurement	4	0	4
ISC	213	Production Planning	4	0	4
ISC	218	Plant Security	4	0	4
ISC	220	Management Problems	4	0	4
ISC	224	Elements of Industrial Hygiene	4	0	4
ISC	243	Free Enterprise	4	0	4
PHY	107	General Physics	4	0	4
			59	2	60

RELATED COURSES:

BUS	123	Business Finance I	4	0	4
BUS	235	Business Management	4	0	4
MAT	101	Principles of Math	4	0	4
MAT	102	Algebra I	4	0	4
MAT	117	Introduction to Statistics	4	0	4
			20	0	20

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	103	Report Writing	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
PSY	101	Introduction to Psychology	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES:

10

Total hours required for graduation = 110

COMPUTER PROGRAMMING DEPARTMENT

BUSINESS COMPUTER PROGRAMMING (T-022)

The primary objective of the Business Computer Programming curriculum is to prepare individuals for gainful employment as computer programmers. The objective is fulfilled through study and application in areas such as computer and systems theories and concepts, data processing techniques, business operations, logic, flow charting, programming procedures and languages, and types, uses and operation of equipment.

Entry-level jobs as computer programmer and computer programmer trainee are available. With experience and additional education, the individual may enter jobs such as data processing manager, computer programmer manager, systems analyst and systems manager.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
		Title	Class	Lab	Credit
EDP	101	Introduction to Data Processing I	4	0	4
EDP	102	Introduction to Data Processing II	4	0	4
EDP	106	Word Processing I	3	2	4
EDP	107	Word Processing II	3	2	4
EDP	109	COBOL I	3	2	4
EDP	110	COBOL II	3	2	4
EDP	116	Business BASIC Language I	3	2	4
EDP	117	Business BASIC Language II	3	2	4
EDP	118	Business BASIC Programming III	3	2	4
EDP	204	COBOL III	3	2	4
EDP	210	LOTUS 1-2-3	3	2	4
EDP	212	Data Base Management	4	0	4
EDP	221	Computer Systems	4	0	4
EDP	230	RPG II Language I	3	2	4
EDP	231	RPG II Language II	3	2	4
EDP	232	RPG II Language III	3	2	4
EDP	240	Computer Augmented Accounting	3	2	4
EDP	290	Advanced Computer Experience	1	6	4
MAT	117	Introduction to Statistics	4	0	4

Each student is required to take 60 credit hours of the above EDP-prefix courses to complete requirements for graduation

64

RELATED COURSES:

BUS	102	Typing I	2	2	3
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	235	Business Management	4	0	4
MAT	101	Principles of Math	4	0	4
MAT	102	Algebra I	4	0	4
			22	10	27

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
ENG	210	Effective Communication	2	0	2
PSY	101	Introduciton to Psychology	4	0	4
			18	0	18

WORK EXPERIENCE/ELECTIVES:

3

Total hours required for graduation = 112

SECRETARIAL AND FASHION SCIENCES DEPARTMENT

ASSOCIATE IN APPLIED SCIENCE DEGREES

SECRETARIAL-EXECUTIVE (T-030)

The purposes of the Executive Secretarial curriculum are to: (1) prepare the individual to enter the secretarial profession, (2) provide an educational program for individuals wanting education for upgrading (moving from one secretarial position to another) or retraining (moving from present position to secretarial position), (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of typewriting, shorthand transcription and business machines operation. Through these skills the individual will be able to perform office-related activities and through the development of personal competencies and qualities will be provided the opportunity to enter the secretarial profession.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
		Title	Class	Lab	Credit
BUS	102	Typewriting I	2	2	3
BUS	103	Typewriting II	2	2	3
BUS	104	Typewriting III	2	2	3
BUS	106	Shorthand I	2	2	3
BUS	107	Shorthand II	2	2	3
BUS	108	Shorthand III	2	2	3
BUS	112	Records Management	2	2	3
BUS	122	Payroll Accounting	2	2	3
BUS	201	Machine Dictation and Transcription	2	2	3
BUS	205	Advanced Typewriting	2	2	3
BUS	206E	Dictation and Transcription I	2	2	3
BUS	207E	Dictation and Transcription II	2	2	3
BUS	208E	Dictation and Transcription III	2	2	3
BUS	211	Office Machines	0	2	1
BUS	214	Secretarial Procedures	2	2	3
BUS	271	Office Management	4	0	4

COE 100	Career Planning and Development	3	0	3
EDP 106	Word Processing I	3	2	4
EDP 107	Word Processing II	3	2	4
EDP 240	Computer Augmented Accounting	3	2	4
		44	36	62

RELATED COURSES:

BUS 101	Introduction to Business	4	0	4
BUS 109	Business Mathematics I	4	0	4
BUS 120	Accounting I	4	4	6
BUS 121	Accounting II	4	4	6
BUS 204	Business Communications	4	0	4
BUS 210	Typing Office Practice	2	2	3
Select two additional Business related courses (See Advisor)		8	0	8
		30	10	35

GENERAL EDUCATION:

ENG 101	Grammar & Composition I	4	0	4
ENG 102	Grammar & Composition II	4	0	4
ENG 104	Reading Dynamics	4	0	4
ENG 204	Fundamentals of Speech	4	0	4
Select one additional General Education course		2	0	2
		18	0	18

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 119

GENERAL OFFICE TECHNOLOGY (T-033)

The purposes of the General Office curriculum are to: (1) prepare the individual to enter clerical-office occupations, (2) provide an educational program for individuals wanting education for upgrading (moving from one position to another) or retraining (moving from present position to a clerical position), and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of typewriting, filing and business machines. Through these skills and through development of personal competencies and qualities, the individual will be able to function effectively in office-related activities.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours
		Title	
			Class
BUS	102	Typewriting I	2
BUS	103	Typewriting II	2
BUS	104	Typewriting III	2
BUS	112	Records Management	2
BUS	120	Accounting I	4
BUS	121	Accounting II	4
BUS	122	Payroll Accounting	2
BUS	201	Machine Dictation and Transcription	2
BUS	205	Advanced Typewriting	2
BUS	210	Typing Office Practice	2
BUS	211	Office Machines	0
BUS	214	Secretarial Procedures	2
BUS	271	Office Management	4
COE	100	Career Planning and Development	3
EDP	106	Word Processing I	3
EDP	107	Word Processing II	3
			<hr/>
			39
			34
			55

RELATED COURSES:

BUS	101	Introduction to Business	4	0	4
BUS	109	Business Mathematics I	4	0	4
BUS	115	Business Law I	4	0	4
BUS	204	Business Communications	4	0	4
BUS	240	Computer Augmented Accounting	3	2	4

Select three of the following:

BUS	117	Personal Law	4	0	4
BUS	123	Business Finance I	4	0	4
BUS	229	Taxes I	4	0	4
BUS	231	Leadership Development	4	0	4
BUS	232	Sales Development	4	0	4
BUS	235	Business Management	4	0	4
BUS	239	Marketing	4	0	4
BUS	243	Advertising	4	0	4
BUS	245	Retailing	4	0	4
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
EDP	101	Introduction to Data Processing I	4	0	4
MAT	101	Basic Arithmetic Skills	4	0	4
			<hr/>		
			31	2	32

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4
ENG	204	Fundamentals of Speech	4	0	4

Select two additional hours from General Education courses.

2	0	2
18	0	18

WORK EXPERIENCE/ELECTIVES:

3

Total hours required for graduation = 108

SECRETARIAL-MEDICAL (T-032)

The purposes of the Secretarial-Medical curriculum are to: (1) prepare the individual to enter the medical secretarial profession through work in a doctor's office, in city, county, state or government offices, (2) provide an educational program for individuals wanting education for upgrading (moving from one medical position to another) or retraining (moving from present position to medical secretarial position, and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of medical typewriting, shorthand transcription and business machines. Through these skills the individual will be able to perform medical, office-related activities and through the development of personal competencies and qualities will be provided the opportunity to enter the medical secretarial profession.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
		Title	Class	Lab	Credit
BUS	102	Typewriting I	2	2	3
BUS	103	Typewriting II	2	2	3
BUS	104	Typewriting III	2	2	3
BUS	106	Shorthand I	2	2	3
BUS	107	Shorthand II	2	2	3
BUS	108	Shorthand III	2	2	3
BUS	112	Records Management	2	2	3
BUS	183M	Medical Terminology and Vocabulary I	4	0	4
BUS	202M	Medical Dictation and Transcription I	2	2	3
BUS	203M	Medical Dictation and Transcription II	2	2	3
BUS	204	Business Communications	4	0	4
BUS	205	Advanced Typewriting	2	2	3
BUS	206E	Dictation and Transcription I	2	2	3
BUS	211	Office Machines	0	2	1
BUS	216	Medical Secretarial Procedures	2	2	3
BUS	271	Office Management	4	0	4
BUS	284M	Medical Terminology and Vocabulary II	4	0	4
EDP	106	Word Processing I	3	2	4
EDP	107	Word Processing II	3	2	4
			46	30	61

RELATED COURSES:

BUS	107	Anatomy and Physiology I	3	2	4
BUS	108	Anatomy and Physiology II	3	2	4
BUS	109	Business Mathematics I	4	0	4
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	210	Typing Office Practice	2	2	3
BUS	248	Medical Insurance	2	2	3
COE	100	Career Planning and Development	3	0	3
			25	16	33

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
		Select one additional General Education course	4	0	4
			20	0	20

WORK EXPERIENCE/ELECTIVES:

6

Total hours required for graduation = 120

FASHION MERCHANDISING AND MARKETING TECHNOLOGY (T-143)

The Fashion Merchandising and Marketing curriculum is designed to provide individuals with fundamental skills in fashions and merchandising activities. The individual will become familiar with the properties, characteristics and construction of fabrics, leather, fur, millinery, wigs, jewelry and cosmetics. Emphasis will be placed on selling techniques, buying, merchandising, displaying, pricing and stock planning and control.

Employment opportunities as assistant buyers, buyers, fashion coordinators, fashion stylists, indoor display specialists, merchandise clerks and store managers or owners will be available in department stores and specialty stores, wholesale and manufacturing firms, buying offices and advertising agencies.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
		Title	Class	Lab	Credit
DMK	240	Math for Retail Buying	4	0	4
DMK	249	Fashion Buying and Merchandising	4	0	4
DMK	260	Visual Merchandising	4	0	4
FAS	101	Principles of Fashion Merchandising	4	0	4
FAS	102	Modeling and Social Usage	2	2	3
FAS	103	Fashion Accessories	4	0	4
FAS	104	Fashion Sketching	2	0	2
FAS	105	Professional Development	4	0	4
FAS	106	Fabric Science	4	0	4
FAS	208	Fashion Salesmanship	4	0	4
FAS	209	Fashion Writing and Communications	4	0	4
FAS	210	Fashion Advertising and Sales Promotion	4	0	4
FAS	211	Introduction to Apparel Design	4	0	4
FAS	212	Psychology of Dress	4	0	4
			52	2	53

RELATED COURSES:

BUS	101	Introduction to Business	4	0	4
BUS	102	Typewriting I	2	2	3
BUS	109	Business Mathematics I	4	0	4
BUS	204	Business Communications	4	0	4
BUS	233	Personnel Management	4	0	4
BUS	239	Marketing	4	0	4
BUS	245	Retailing	4	0	4
ECO	102	Economics I	4	0	4
EDP	101	Introduction to Data Processing	4	0	4
HUM	110	History of Dress	4	0	4
			38	2	39

GENERAL EDUCATION:

ART	101	Art Appreciation	4	0	4
ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
ENG	210	Effective Communication	2	0	2
			18	0	18

WORK EXPERIENCE/ELECTIVES:

6

Total hours required for graduation = 116

CRIMINAL JUSTICE DEPARTMENT

CRIMINAL JUSTICE-LAW ENFORCEMENT OPTION (T-129)

The Criminal Justice Technology curriculum is designed so that it may be a multi-faceted program of study. It may consist of study options in corrections, law enforcement and security services.

The curriculum is designed with a core of courses to afford one the opportunity to acquire basic knowledge, skills and attitudes in the generally accepted subject areas associated with a two-year study of correctional services, law enforcement services and security services. It includes subjects such as interpersonal communications, law, psychology and sociology.

In addition to core subjects, the correctional services option provides an opportunity to study other generally accepted subjects indigenous to a two-year correctional services program such as confinement facility administration, correction law, counseling, probation-parole services and rehabilitation options. Similarly, the law enforcement option provides an opportunity to study other generally accepted subjects included in a two-year law enforcement services program such as criminal behavior, criminal investigation, patrol operation, traffic management, and other aspects of law enforcement administration and operations. The security services option provides an opportunity to study other generally accepted subjects related to a two-year security services program such as accident prevention and safety management, common carrier protection, fire prevention, private security, industrial security, retail security, security systems and surveillance.

Job opportunities are available with federal, state, county and municipal governments. In addition, knowledge, skills and attitudes acquired in this course of study qualify one for job opportunities with private enterprise in such areas as industrial, retail and private security.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

		Title	Hours		
			Class	Lab	Credit
CJC	101	Introduction to Criminal Justice	4	0	4
CJC	102	Introduction to Criminology	4	0	4
CJC	110	Juvenile Delinquency	4	0	4
CJC	115	Criminal Law	4	0	4
CJC	116	Laws of Arrest, Search and Seizure	4	0	4
CJC	118	Criminal Justice Information Services	4	0	4
CJC	201	Traffic Planning and Management	4	2	5
CJC	205	Criminal Evidence	4	0	4
CJC	208	Patrol Procedures	4	0	4
CJC	209	Criminal Investigation I	4	0	4
CJC	210	Criminal Investigation II	4	0	4
CJC	211	Introduction to Criminalistics	4	2	5
CJC	220	Police Organization and Management	4	0	4
CJC	225	Criminal Procedures	4	0	4
CJC	240	Defense Tactics and Firearms	2	2	3
CJC	249	Seminar in Criminal Justice	4	0	4
			62	6	65

RELATED COURSES:

CAT	116	Photography I	3	2	4
MAT	101	Principles of Math	4	0	4
POL	102	Government-National	4	0	4
POL	103	Government-State and Local	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
PSY	238	Dynamics of Group Encounter	4	0	4
			27	2	28

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
PSY	101	Introduction to Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			20	0	20

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 117

CRIMINAL JUSTICE-CORRECTIONS OPTION (T-129)

The Criminal Justice Technology curriculum is designed so that it may be a multi-faceted program of study. It may consist of study options in corrections, law enforcement and security services.

The curriculum is designed with a core of courses to afford one the opportunity to acquire basic knowledge, skills and attitudes in the generally accepted subject areas associated with a two-year study of correctional services, law enforcement services and security services. It includes subjects such as interpersonal communications, law, psychology and sociology.

In addition to core subjects, the correctional services option provides an opportunity to study other generally accepted subjects indigenous to a two-year correctional services program such as confinement facility administration, correction law, counseling, probation-parole services and rehabilitation options. Similarly, the law enforcement option provides an opportunity to study other generally accepted subjects included in a two-year law enforcement services program such as criminal behavior, criminal investigation, patrol operation, traffic management, and other aspects of law enforcement administration and operations. The security services option provides an opportunity to study other generally accepted subjects related to a two-year security services program such as accident prevention and safety management, common carrier protection, fire prevention, private security, industrial security, retail security, security systems and surveillance.

Job opportunities are available with federal, state, county and municipal governments. In addition, knowledge, skills and attitudes acquired in this course of study qualify one for job opportunities with private enterprise in such areas as industrial, retail and private security.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
			Class	Lab	Credit
CJC	101	Introduction to Criminal Justice	4	0	4
CJC	110	Juvenile Delinquency	4	0	4
CJC	115	Criminal Law	4	0	4
CJC	116	Laws of Arrest, Search and Seizure	4	0	4
CJC	118	Criminal Justice Information Services	4	0	4
CJC	203	Introduction to Corrections	4	0	4
CJC	204	Introduction to Probation and Parole	4	0	4
CJC	205	Criminal Evidence	4	0	4
CJC	207	Confinement Facilities Administration	4	0	4
CJC	215	Contemporary Correctional Issues	4	0	4

CJC	221	Correctional Administration	4	0	4
CJC	223	Correctional Law	4	0	4
CJC	224	Rehabilitation Techniques	4	0	4
CJC	225	Criminal Procedures	4	0	4
CJC	230	Correctional Counseling	4	0	4
CJC	240	Defense Tactics and Firearms	2	2	3
CJC	249	Seminar in Criminal Justice	4	0	4
			66	2	67

RELATED COURSES:

CAT	116	Photography I	3	2	4
MAT	101	Principles of Math	4	0	4
POL	102	Government-National	4	0	4
POL	103	Government-State and Local	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
PSY	238	Dynamics of Group Encounter	4	0	4
			27	2	28

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
PSY	101	Introduction to Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			20	0	20

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 119

CRIMINAL JUSTICE-SECURITY OPTION (T-129)

The Criminal Justice Technology curriculum is designed so that it may be a multi-faceted program of study. It may consist of study options in corrections, law enforcement and security services.

The curriculum is designed with a core of courses to afford one the opportunity to acquire basic knowledge, skills and attitudes in the generally accepted subject areas associated with a two-year study of correctional services. It includes subjects such as interpersonal communications, law, psychology and sociology.

In addition to core subjects, the correctional services option provides an opportunity to study other generally accepted subjects indigenous to a two-year correctional services program such as confinement facility administration, correction law, counseling, probation-parole services and rehabilitation options. Similarly, the law enforcement option provides an opportunity to study other generally accepted subjects included in a two-year law enforcement

services program such as criminal behavior, criminal investigation, patrol operation, traffic management, and other aspects of law enforcement administration and operations. The security services option provides an opportunity to study other generally accepted subjects related to a two-year security services program such as accident prevention and safety management, common carrier protection, fire prevention, private security, industrial security, retail security, security systems and surveillance.

Job opportunities are available with federal, state, county and municipal governments. In addition, knowledge, skills and attitudes acquired in this course of study qualify one for job opportunities with private enterprise in such areas as industrial, retail and private security.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours		
			Class	Lab	Credit
CJC	101	Introduction to Criminal Justice	4	0	4
CJC	106	Security Investigation	4	0	4
CJC	110	Juvenile Delinquency	4	0	4
CJC	115	Criminal Law	4	0	4
CJC	116	Laws of Arrest, Search and Seizure	4	0	4
CJC	118	Criminal Justice Information Services	4	0	4
CJC	205	Criminal Evidence	4	0	4
CJC	208	Patrol Procedures	4	0	4
CJC	222	Introduction to Security Systems	4	0	4
CJC	225	Criminal Procedures	4	0	4
CJC	226	Civil and Criminal Responsibilities	4	0	4
CJC	240	Defense Tactics and Firearms	2	2	3
CJC	245	Electronic Detection and Polygraph	4	2	5
CJC	248	Surveillance Techniques	4	0	4
CJC	249	Seminar in Criminal Justice	4	0	4
ISC	107	OSHA	4	0	4
ISC	218	Plant Security	4	0	4
			66	4	68

RELATED COURSES:

CAT	116	Photography I	3	2	4
MAT	101	Principles of Math	4	0	4
POL	102	Government-National	4	0	4
POL	103	Government-State and Local	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
PSY	238	Dynamics of Group Encounter	4	0	4
			27	2	28

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
PSY	101	Introduction to Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 120



RADIOLOGIC TECHNOLOGY DEPARTMENT

ASSOCIATE IN APPLIED SCIENCE DEGREE RADIOLOGIC (X-RAY) TECHNOLOGY (T-061)

The Radiologic Technology curriculum prepares graduates to be competent Medical Radiographers.

The radiographer is a skilled person qualified by technological education to provide patient services using imaging modalities, as directed by physicians qualified to order and/or perform radiologic procedures.

The radiographer shall perform effectively by:

- A. Applying knowledge of the principles of radiation protection for the patient, self and others.
- B. Applying knowledge of anatomy, positioning and radiographic techniques to accurately demonstrate anatomical structures on a radiograph.
- C. Determining exposure factors to achieve optimum radiographic technique with a minimum of radiation exposure to the patient.
- D. Examining radiographs for the purpose of evaluating technique, positioning and other pertinent technical qualities.
- E. Exercising discretion and judgment in the performance of medical imaging procedures.
- F. Providing patient care essential to radiologic procedures.
- G. Recognizing emergency patient conditions and initiating lifesaving first aid.

Graduates are eligible to take the national examination given by the American Registry of Radiologic Technologists for certification and registration as medical radiographers.

Graduates may be employed in Radiology departments in hospitals, clinics, physicians' offices, research and medical laboratories, federal and state agencies and industry.

Individuals desiring a career in radiologic technology should take courses in Biology, Algebra and Chemistry and/or Physics prior to entering the program.

COURSE AND HOUR REQUIREMENTS**MAJOR COURSES:**

RAD	101	Positioning I	Hours			
			Class	Lab	Clinic	Credit
RAD	102	Principles of Radiographic Technique I	3	2	0	4
RAD	103	Processing Technique	2	2	0	3
RAD	104	Radiographic Anatomy	4	0	0	4
RAD	105	Critique I	1	0	0	1
RAD	106	Clinical I	0	0	15	5
RAD	110	Introduction to Radiologic Technology	1	0	0	1
RAD	111	Positioning II	3	2	0	4
RAD	112	Principles of Radiographic Technique II	2	2	0	3
RAD	113	Critique II	1	0	0	1
RAD	114	Clinical II	0	0	15	5
RAD	121	Positioning III	3	2	0	4
RAD	123	Critique III	1	0	0	1
RAD	124	Clinical III	0	0	24	8
RAD	131	Positioning IV	3	2	0	4
RAD	134	Clinical IV	0	0	24	8
RAD	141	Special Procedures I	2	0	0	2
RAD	201	Radiologic Protection	2	0	0	2
RAD	203	Clinical V	0	0	24	8
RAD	212	Clinical VI	0	0	24	8
RAD	223	Clinical VII	0	0	30	10
RAD	233	Clinical VIII	0	0	39	13
RAD	241	Special Procedures II	2	0	0	2
RAD	245	Seminar I	1	0	0	1
RAD	246	Seminar II	1	0	0	1
			35	14	195	107

RELATED COURSES:

BIO	107	Anatomy and Physiology I	3	2	0	4
BIO	108	Anatomy and Physiology II	3	2	0	4
EDP	101	Introduction to Data Processing I	4	0	0	4
MAT	131	Algebra II	4	0	0	4
PHY	107	General Physics	4	0	0	4
PHY	108	Radiation Physics	3	2	0	4
			21	6	0	24

GENERAL EDUCATION:

ENG	101	Grammar & Composition I	4	0	0	4
ENG	102	Grammar & Composition II	4	0	0	4
MAT	134	Algebra III	4	0	0	4
PSY	101	Introduction to Psychology	4	0	0	4

Select one additional course from the following:

ENG	103	Report Writing	4	0	0	4
ENG	204	Fundamentals of Speech	4	0	0	4
PSY	201	Abnormal Psychology	4	0	0	4
			20	0	0	20

WORK EXPERIENCE/ELECTIVES:

0

Total hours required for graduation = 151

COURSE DESCRIPTIONS**GENERAL EDUCATION AND TECHNICAL**

✓ **ART 101—Art Appreciation** 4 0 4
 An introduction to fundamental elements and principles of creative art expression emphasizing composition, design, shape, value styles, and movement.

✓ **ART 102—Beginning Drawing** 3 2 4
 A general introduction for the beginning art student who wishes to develop an ability to create two-dimensional representational images in traditional drawing media.

✓ **ART 103—American Art History** 4 0 4
 A study of the principal painters, sculptors, architects and craftsmen in America from pre-Columbian time to the present and the work they produced, which greatly enhanced our cultural heritage.

ART 202—Advanced Drawing 3 2 4
 A development of the basic skill acquired in Beginning Drawing or other art courses. Topics of study include still life, landscape, and figure drawing.

ART 203—Painting Seminar 3 2 4
 Offered periodically for students who have had drawing experience and wish to progress to painting. Students will work with various media exploring the techniques of each.

✓ **ART 205—Film Appreciation** 4 0 4
 An analysis of the creativity and special techniques that combine to represent the broad range of ideas and emotions of quality motion pictures.

AVM 100—Introduction to Television and Cable Production 4 0 4
 An introduction to creative techniques, materials, and equipment involved in television taping. Pre-production, production, and post-production principles and methods are designed for beginning and intermediate students to improve their use of home and professional systems.

AVM 101—Advanced Television and Cable Production 4 2 5
 A continuation of AVM 100; use of studio equipment for titling and effects; special projects on television production.

AVM 102—Introduction to Audio-Vusial Equipment and Basic Production 3 2 4
 A study of the operation of projection equipment, tape recorders, record players and synchronization equipment.

AVM 200—Media Production I 3 2 4
 Planning, scripting, and developing sequences for transparencies, audiotapes, displays, videotapes, films; titling, audio mixing, displaying materials. Prerequisite: AVM 102.

AVM 201—Media Production Lab Project 0 10 5
 Student will work in cooperation with the photography and the audio-visual services departments in the production of instructional and institutional media.

AVM 202—Media Production II 3 2 4

The development of a photographic series, including film processing, editing negatives, and making, mounting, and displaying prints. Development of a sound-slide series. Prerequisites: CAT 118, AVM 200.

AVM 203—Media Production III 3 2 4

The development of a single concept and its production in various forms: live, video, slide series.

AVM 204—Selective Media 3 2 4

Experience by observation of a variety of media usages. Consideration of advertising. A study of the vocal aspects of radio and television broadcasting and the principles of personal style and performance in the media. Special emphasis on script writing.

AVM 205—Equipment Repair 2 4 4

This course is designed to help the student understand the mechanical and electrical operations of projection equipment, tape recorders, record players, cable and television equipment, etc. Emphasis will be on locating, troubleshooting, and repairing equipment.

AVM 206—Lighting and Sound 2 2 3

A study of the use of lighting for stage, film, and video; a study of studio sound problems, microphone types, the use of audio mixers.

BIO 101—Biology I 3 2 4

An introduction to basic biological principles, including elementary chemistry, cell structure and function, genetics, molecular biology, ecology and evolution.

BIO 102—Biology II 3 2 4

A survey of the animal kingdom including study of selected animals from each of the major groups. Emphasis is placed on the vertebrates.

BIO 103—Biology III 3 2 4

A survey of the plant kingdom including study of selected plants from each of the major groups, with emphasis on the seed plants.

✓ BIO 107—Anatomy & Physiology I 3 2 0 4

A study of the structure and normal function of the human body with man identified as a living organism composed of living cells, tissues, organs, and systems. Included are the basic physiologic aspects of skin; the skeletal, articular, muscular, and nervous systems; and the special senses. A laboratory portion includes relevant experiments to augment the student's learning of body structure and functions.

✓ BIO 108—Anatomy & Physiology II 3 2 0 4

A continuation of the study of the structure and normal function of man as a living organism. Special emphasis is on the circulatory, lymphatic, respiratory, digestive, urinary, endocrine, and reproductive systems and fluid and electrolyte balance. Laboratory experiences include study of models and small animal dissection for insight into comparative structure and function of man. Prerequisite: BIO 107.

✓ BIO 201—Zoology 3 2 4

A comprehensive study of the animal kingdom including anatomy, physiology, taxonomy, and ecology. Special emphasis will be placed on the invertebrates, and local animals. Prerequisites: BIO 101, 102, 103, or permission of instructor.



BIO 202—Botany

3 2 4

A comprehensive study of the plant kingdom including anatomy, physiology, taxonomy, and ecology. Special emphasis will be placed on the higher plants. Prerequisites: BIO 101, 102, 103, or permission of instructor.

BUS 101—Introduction to Business

4 0 4

A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organizations and management. Students learn the basic fundamentals of the free enterprise system.

BUS 102—Typewriting I

2 2 3

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence and tabulation.

BUS 103—Typewriting II

2 2 3

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence and business forms. Prerequisite: BUS 102 or equivalent.

BUS 104—Typewriting III

2 2 3

Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102 or equivalent.

BUS 106—Shorthand I

2 2 3

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms and phrases.

BUS 107—Shorthand II

2 2 3

Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: BUS 106 or equivalent.

BUS 108—Shorthand III

2 2 3

Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Prerequisite: BUS 107.

BUS 109—Business Math I

4 0 4

This course stresses the fundamental operations and their application to business problems. Topics covered include: fractions, decimals, percents, ratios, payroll, interest, and installment buying. Prerequisite: MAT 100.

BUS 110—Office Machines I

1 2 2

Students receive training in the touch method of operation for the electronic printing and display calculator with a goal of 150 strokes per minute by the end of the quarter. Mathematical computations include addition, subtraction, multiplication, division, rounding, fractions, decimals, percents, percentage, rate, base, discounts, payroll, and interest. Prerequisite: BUS 109.

BUS 111—Business Math II

4 0 4

This course covers advanced business math topics such as markup, markdown, inventory, depreciation, stock, and displaying data. Continuation of BUS 109. Prerequisite: BUS 109.

BUS 112—Records Management

2 2 3

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Methods covered are Alphabetic, Numeric, Geographic, Subject, Soundex and Chronological filing.

BUS 115—Business Law I

4 0 4

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments and agencies.

BUS 116—Business Law II

4 0 4

Includes the study of laws pertaining to bailments, sales risk-bearing, partnership-corporation, mortgages and property rights. Prerequisite: BUS 115.

BUS 117—Personal Law

4 0 4

A general survey of law as it affects the individual citizen including the court system and protection of the individual's rights. Emphasis is placed on the Bill of Rights to the U.S. Constitution. Laws governing vehicle operation, domestic relations and consumer protection will also be covered.

BUS 120—Accounting I

4 4 6

Principles, techniques and tools of accounting, summarizing, analyzing and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: BUS 109.

BUS 121—Accounting II

4 4 6

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution to management problems. Prerequisite: BUS 120.

BUS 122—Payroll Accounting

2 2 3

A detailed study of federal and state regulations, computations, deductions and general accounting for payrolls. Prerequisite: BUS 120.

BUS 123—Business Finance I

4 0 4

Financing of business units, as individuals, partnerships, corporations and trusts. A detailed study is made of short-term, long-term and consumer financing.

BUS 124—Business Finance II

4 0 4

Financing federal, state and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: BUS 123.

BUS 162—Fundamentals of Real Estate 6 0 6
 This course consists of instruction in fundamental real estate principles and practices, including real estate law, financing, brokerage, closing, valuation, management, taxation and mathematics. Also included is instruction on residential building construction, land use, the real estate market and the North Carolina Real Estate Commission. Upon completion of this course, the student will have met the educational requirements of the North Carolina Real Estate Licensing Board for admission to the real estate broker licensing examination. The primary objectives of this course are (1) to provide students with the basic knowledge and skills necessary for entry-level real estate salesmen and (2) to prepare students for the real estate salesman licensing examination.

BUS 164—Real Estate Law 3 0 3
 This course consists of advanced-level instruction in real property ownership and interests, transfer of title to real property, land use controls, real estate brokerage and the law of agency, real estate contracts, landlord and tenant law, mortgages/deeds of trust, property insurance, federal income taxation of real estate, the N.C. Real Estate License Law, Rules/Regulations of the N.C. Real Estate Licensing Board, and the Licensing Board's "Trust Account Guidelines."
 Prerequisite: BUS 162 or possession of a current salesman's license.

BUS 183M—Medical Terminology and Vocabulary 4 0 4
 This course teaches the student the mechanics of understanding medical words—their roots, prefixes and suffixes. Students learn to spell, pronounce and define medical terms that may be encountered by a medical secretary.

BUS 201—Machine Dictation and Transcription 2 2 3
 Objectives of this course are to develop skill in using various transcription machines and to transcribe correctly at the typewriter. The student will gain a knowledge of many kinds of business correspondence, increase business vocabulary and develop an understanding of secretarial procedures.

BUS 202M—Medical Dictation and Transcription I 2 2 3
 This course prepares the student to become a skilled medical transcriptionist using a typewriter, transcribing unit and pre-recorded cassettes and belts. Material covered includes case studies, physical examinations, operation records, medical correspondence, and x-ray or pathological reports, etc.
 Prerequisites: BUS 183M, BUS 205.

BUS 203M—Medical Dictation and Transcription II 2 2 3
 This course is a continuation of BUS 202. The student continues to build skill and speed in transcribing various medical records at the typewriter. Upon successful completion of course requirements the student will receive the AMRA certificate. Prerequisite: BUS 202M.

BUS 204—Business Communications 4 0 4
 Develops skills and techniques in writing and typing business communications. Emphasis is placed on writing and typing action-getting sales letters and prospectuses. Business reports, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry are covered in this course. Prerequisites: BUS 102 and ENG 101.

BUS 205—Advanced Typewriting 2 2 3
 Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, statistical tabulation, and the typing of reports, manuscripts and legal documents. Prerequisite: BUS 104.

BUS 206E—Dictation and Transcription I 2 2 3

Develops the skills of taking dictation and transcription at the typewriter materials appropriate to the course of study, which includes a review of theory and dictation of familiar and unfamiliar material at varying rates of speed. Prerequisite: BUS 108.

BUS 207E—Dictation and Transcription II 2 2 3

Covering materials appropriate to the course of study, the student develops the accuracy, speed and vocabulary to meet the stenographic requirements of business and professional offices. Prerequisite: BUS 206.

BUS 208E—Dictation and Transcription III 2 2 3

Principally a speed building course covering materials appropriate to the course of study, with emphasis on building transcription speed and the producing of mailable copies. Prerequisite: BUS 207.

BUS 209—Real Estate Finance 3 0 3

This course consists of advanced-level instruction on the major aspects of financing real estate transactions, including sources of mortgage funds, the secondary mortgage market, financing instruments, types of mortgage loans, underwriting mortgage loans, consumer legislation affecting real estate financing, real property valuation, closing real estate sales transactions and finance mathematics. Prerequisite: BUS 162 or possession of current salesman's license.

BUS 210—Typing Office Practice 2 2 3

A course designed to familiarize the student with the correct typing of business correspondence. Emphasis is placed upon correct procedures and adaptability of varying office methods. Prerequisite: BUS 205.

BUS 211—Office Machines 0 2 1

This course is designed to teach the student the correct procedures to follow in preparing, copying and duplicating mats. In addition, the student learns to operate various types of copying and duplicating equipment. Prerequisite: BUS 104.

BUS 214—Secretarial Procedures 2 2 3

Designed to acquaint the student with the responsibilities encountered by a secretary during a work day. Among these are the following: receptionist duties, handling and mail, telephone techniques, telegrams, office records, travel information, purchasing of supplies, office organization and insurance claims. Prerequisite: BUS 104.

BUS 216—Medical Secretarial Procedures 2 2 3

This course introduces the medical secretary to the activities, responsibilities, skills and work habits encountered in the professional office. Some of these are meeting and handling patients, processing medical records and forms, managing the office and assisting the doctor. Suggested Prerequisite: BUS 104.

BUS 219—Credit Procedures and Problems 4 0 4

Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included.

BUS 222—Accounting III

4 4 6

Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: BUS 121.

BUS 223—Intermediate Accounting I

4 4 6

This course presents concepts adhered to in modern accounting, including the principles, procedures, and methods that are applied in the preparation of financial statements. Changes in the form of content of basic financial statements receive special emphasis. Prerequisite: BUS 222.

BUS 224—Intermediate Accounting II

4 4 6

This course provides instruction in the organizational, structural, and financial levels of accounting. Special emphasis being given to owners equity, business financing, bonds and notes, etc. Prerequisite: BUS 223.

BUS 225—Cost Accounting I

2 2 3

Nature and purposes of cost accounting; accounting for direct labor, materials and factory burden; job cost and standard cost principles and procedures; selling and distribution cost; budgets and executive use of cost figures. Prerequisite: BUS 222.

BUS 226—Cost Accounting II

2 2 3

Continued study in cost accounting with emphasis on process cost systems, standard cost accounting and cost analysis for management decision making. Prerequisite: BUS 225.

BUS 229—Taxes I

4 0 4

Preparation of Individual Tax Returns—1040EZ, 1040A, 1040, Schedule A and B—are covered in this course, along with other supporting schedules and forms.

BUS 230—Taxes II

4 0 4

This course provides instruction to Business and Professional Tax Returns. More involved and complicated tax situations—Capital Gains and Losses, Retirement Plans, etc.—are given special emphasis. Instruction in Partnership and Corporation Taxes and Tax Returns is also provided. Prerequisite: BUS 229.

BUS 231—Leadership Development

4 0 4

Leadership Development helps students attain the personal attributes and managerial skills that foster success on the job. Case histories, self-assessment quizzes, and step-by-step guidelines build students' self-confidence while covering personality development, speechpower, memory, creativity, creative selling, telephone technique, management and leadership, personal appearance, business and social success, and employment.

BUS 232—Sales Development

4 0 4

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstration required.

BUS 233—Personnel Management

4 0 4

Principles of organization and management of personnel, procurement, placement training, performance, checking, supervision, remuneration, labor relations, fringe benefits and security.

CAT 117—Photography II Continuation of CAT 116.	3	2	4
CAT 118—Basic Film Technology A study of basic film techniques including camera use, lighting, exposure, editing, emphasis on distinction between film and video; animation; projects in "Super-8mm."	3	2	4
CAT 119—Photography III—Color Printing Photography III is a continuation of the learning experience begun in Photography I and Photography II. (These courses will not be prerequisites to Photography III.) Many aspects and techniques involved with photographing in color beyond those normally encountered in black and white photography will be covered in detail. The processing and printing of color images from color negatives and color slides will give each student a thorough working knowledge of new lab procedures and color printing techniques.	3	2	4
CHM 101—Chemistry I Fundamental principles and laws underlying chemical action with special emphasis on the non-metals, their compounds, theories and problems. Laboratory deals with the non-metallic elements and their compounds, and the theories of qualitative and quantitative analysis. A working knowledge of algebra is highly recommended before entry into these courses which must be completed in sequence. Prerequisite: MAT 101.	3	2	4
CHM 102—Chemistry II A continuation of CHM 101. Prerequisite: CHM 101.	3	2	4
CHM 103—Chemistry III A continuation of CHM 101 and CHM 102. Prerequisite: CHM 102.	3	2	4
CJC 101—Introduction to Criminal Justice A general course to familiarize the student with a philosophy and history of criminal justice, including its legal limitations in a democratic republic, a survey of the primary duties and responsibilities of the various criminal justice agencies, a delineation of the basic processes of justice, an evaluation of criminal justice's current position, and an orientation relative to criminal justice as a vocation.	4	0	4
CJC 102—Introduction to Criminology An in-depth look and study of the nature and causes of crime, theories of crime and punishment, the law enforcement officer's role in the control of crime, and a look at society as a cause or control of crime development.	4	0	4
CJC 103—The Art of Self Defense It is becoming increasingly important in our society for men and women to learn how to recognize and react to potentially violent situations. This course is designed to instill the basic skills required for one to react in a positive and confident manner when such confrontation cannot be avoided.	4	0	4
CJC 106—Security Investigation This course is designed to familiarize the student with utilization of personnel security questionnaires and other sources of background data to assure complete investigations. Familiarization with investigative techniques and procedures are emphasized along with the working relationship between the security investigator and other members of the Criminal Justice community.	4	0	4

CJC 110—Juvenile Delinquency	4	0	4
A study of the nature and extent of juvenile delinquency; methods of research; delinquency and the law; delinquency causation and principles of delinquency control. Emphasis is on North Carolina Juvenile Delinquency procedures and practices.			
CJC 115—Criminal Law	4	0	4
This course is designed to present a basic concept of criminal law and to provide a legal groundwork for those who seek to enter the criminal justice field. Historical development of criminal laws will be discussed from sources such as English Common Law.			
CJC 116—Laws of Arrest, Search, and Seizure	4	0	4
The constitutional requirements and limitations for a lawful arrest and legal search; delinquency and the law; delinquency causation and principles of requirements will be studied.			
CJC 118—Criminal Justice Information Services	4	0	4
Analysis of methods of communications within the police area. These shall include basic incident reporting, verbal communications, records administration, and basic research design. The overall importance of each area as they relate to the information flow and the impact of that flow on the Criminal Justice System will be studied.			
CJC 200—Basic Police Techniques	6	18	12
An elective course designed to meet and exceed the North Carolina Training and Standards Council requirement for police officer basic training. This course will be taught by a combination of in-service and academic professionals utilizing a hands-on approach to learning.			
CJC 201—Traffic Planning and Management	4	2	5
A study which covers the history of the traffic enforcement problems and gives overviews of the problem as it exists today. Attention will be given to the three "E's" and the organization of the traffic unit: the responsibilities to the traffic function of the various units within the law enforcement agency, enforcement tactics, evaluation of the traffic program effectiveness, and the allocation of men and materials.			
CJC 203—Introduction to Corrections	4	0	4
A history and philosophy of the field of correction with an examination of the total correctional process from the enforcement through the administration of justice, probation, prisons, and correctional institutions and parole.			
CJC 204—Introduction to Probation and Parole	4	0	4
Probation as a judicial process and parole as an executive function are examined as community-based correctional programs and the use of pardons are reviewed providing an overview of this administrative process.			
CJC 205—Criminal Evidence	4	0	4
This course is designed to cover the kinds and degrees of evidence and the rules governing the admissibility of evidence in court.			

CJC 206—Police Photography

4 0 4

Instruction covers the processing and printing of film; what pictures to take of a crime scene; legal aspects of crime photography; preparation of courtroom photo evidence; lighting at a crime scene; care of photographic equipment.

CJC 207—Confinement Facilities Administration

4 0 4

This course is designed to familiarize the student with the supervision and the administration of confinement facilities involving techniques of inmate supervision, security, medical care of prisoners, food preparation, sanitation, and various legal aspects controlling detention facilities, correctional institutions, and jails.

CJC 208—Patrol Procedures

4 0 4

Various functions of the Patrol Division and the basic divisions of the police force will be discussed. This course utilizes a "field problem" approach to learning by providing various alternatives of action on the part of the student.

CJC 209—Criminal Investigation I

4 0 4

This course introduces the student to fundamentals of investigation, crime scene search, recording, collection and preservation of evidence. Sources of information, interview and interrogation, case preparation, and court presentation will be discussed.

CJC 210—Criminal Investigation II

4 0 4

A continuation of Criminal Investigation I with emphasis on specific offenses such as homicide, burglary, robbery, larceny, narcotics, arson, and sex crimes. Prerequisite: CJC 209.

CJC 211—Introduction to Criminalistics

4 2 5

Study of Criminal Investigation including a general survey of the methods and techniques used in modern scientific investigation of crime, and emphasis upon the practical use of these modern methods by the student. Laboratory techniques will be demonstrated and the student will participate in the actual use of the scientific laboratory and its equipment.

CJC 215—Contemporary Correctional Issues

4 0 4

A look at current trends and controversial issues within the correctional institutions. A critical look at serving time and punitive vs. rehabilitation techniques are explored along with philosophical concepts of incarceration.

CJC 220—Police Organization and Management

4 0 4

Introduction of principles of organization and administration, personnel management, training, communication, records and property maintenance will be discussed. Emphasis will be on administrative decision making and leadership styles necessary for the proper functioning of a police organization.

CJC 221—Correctional Administration

4 0 4

Emphasis in the principles of administration in the correctional setting including budgeting, financial control, recruitment and development of staff, administration, decision making, public relations, and other correctional administrative functions.

CJC 222—Introduction to Security Systems

4 0 4

An overview of the total security concept which includes industrial, commercial, retail security. A general background of security designed for individuals interested in employment in private security will also be discussed.

CJC 223—Correctional Law

4 0 4

A look at specific laws as they pertain to correction, care, custody, and control. A look at the basic responsibilities of the correctional officer concerning the law, liability and consequences of actions taken.

CJC 224—Rehabilitation Techniques

4 0 4

This course is designed to provide the student with the opportunity to explore the different avenues of rehabilitation. The new and innovative techniques of rehabilitation will be emphasized as they relate to successful methods.

CJC 225—Criminal Procedures

4 0 4

This course is designed to provide the student with a review of court system procedures from incident to final disposition. The principles of constitutional, federal, state, local and civil laws as they apply to and affect Criminal Justice personnel are studied.

CJC 226—Civil and Criminal Responsibility

4 0 4

This course emphasizes the civil and criminal legal responsibility of security personnel. It involves control and supervision of company property including entries and exits. It stresses the legal liability of the individual and the company.

CJC 230—Correctional Counseling

4 0 4

This course is designed to provide the student with information pertaining to counseling techniques as they apply to the needs of a corrections officer. Areas to be examined: vocational rehabilitation, alcohol detoxification, welfare services, child guidance and mental health clinics, employment services.

CJC 240—Defense Tactics and Firearms

2 2 3

Actual firearm training on the firing range, proper use and care of weapons will be demonstrated, with student participation.

CJC 245—Electronic Detection and Polygraph

4 2 5

This course is designed to provide the student with an understanding of electronic detection devices and equipment. It stresses the legalities of their use. The use of the polygraph as an investigative aid is covered along with the PSE. The importance of the pre-test interview, question formulation and post-test interview is stressed and demonstrated.

CJC 248—Surveillance Techniques

4 0 4

This course is designed to cover all types of surveillance techniques and the use of surveillance equipment. Emphasis is placed on loss prevention in relation to employee and customer activities in industrial, commercial, and retail settings. Legal implications of surveillance equipment will also be examined.

CJC 249—Seminar in Criminal Justice

4 0 4

An overview of the Criminal Justice System. Critical analysis of all areas of the system with emphasis on student oral participation.

COE 100—Career Planning and Development

3 0 3

A study of cooperative work experience education. All phases of the program are reviewed with particular attention devoted to preparing the student for entry into the world of work. The individual process of career decision making and methods of securing and retaining a job are emphasized.

COE 101-106—Work Experience I-VI **each - up to** **0 20 2**
 Through the Cooperative Education Program the student works on a part-time basis in a position closely related his or her program of study and for an employer selected and/or approved by the college. In addition to on-the-job supervision by the employer, the student is supervised periodically by a Co-op coordinator from the institution. Prerequisites: One quarter as a full-time student at CTC and full admission to the Co-op Program.

DFT 110—Introduction to Drafting **4 0 4**

In this course, the student will learn to organize for presentation on prints mechanical, architectural, and geographic information. This information will be presented through use of orthographics, isometrics, sectional drawings, detail drawings, dimensioning, notes and lettering. The course emphasis will be on the general presentation of this information as applied to different areas of drafting and drawing. The student will develop these skills through actual practice with the most common drawing tools.

DMK 240—Math for Retail Buying **4 0 4**

Concerns itself with the scientific use of numbers in merchandising, and the figures and mathematical techniques that are employed to translate fashion into the profit-making activities of planning, pricing, and controlling quantities. Prerequisite: BUS 109.

DMK 249—Fashion Buying and Merchandising **4 0 4**

This course examines in depth the planning, buying, and selling of merchandise. The course deals with buying as a career and the organization of retail stores. Merchandising techniques that are used to plan assortments, determine sources of supply, select merchandise, negotiate buying, and follow through on the sales of merchandise are some of the more important parts of this course.

DMK 260—Visual Merchandising **4 0 4**

Examines display as a visual merchandising medium, and covers the principles of display design and their applications to fashion merchandising environs.

DRA 105—Theatrical Performance **4 0 4**

Designed to give the student experience in an appreciation of a variety of behind-the-scenes and on-stage procedures that are requisite to a theatrical production.

DRA 106—Dramatic Production **4 0 4**

Designed to give the student further experience in theatrical productions with emphasis placed on technical theatre.

ECO 102—Economics I **4 0 4**

The fundamental principles of economics including the institutions and practice by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.

ECO 104—Economics II **4 0 4**

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance and economic problems.

ECO 201—Labor Economics

4 0 4

Emphasis is placed on the history of the labor movements in the United States, the development of methods and strategies by labor organizations and by management, the shift in the means of public control, and the factors on income and economic security.

EDP 101—Introduction to Data Processing I

4 0 4

A course designed to teach computer terminology and the fundamentals of computers in our society. It gives an overview of ways computers are used. It is a good first "hands-on" experience.

EDP 102—Introduction to Data Processing II

4 0 4

A survey of things personal computers can do. The student learns how to interact with a computer while learning fundamental skills in several computer applications such as WORDSTAR 3.3 word processing, SUPERCALC 3 spreadsheets, and dBASE III data base management. This course may be taken at the same time as EDP 101.

EDP 106—Word Processing I

3 2 4

An extensive course designed to teach computer users word processing skills using WordPerfect. Creating, editing, printing, and storing documents will be learned.

EDP 107—Word Processing II

3 2 4

A continuation of EDP 106 using advanced concepts in WordPerfect.

EDP 109—COBOL I

3 2 4

This course is designed to give the student an introduction to the COBOL programming language and to provide basic skills in the use of this language. The student will learn pseudocoding techniques and will analyze, evaluate, and program commercial applications.

EDP 110—COBOL II

3 2 4

A second course in the COBOL programming language using more advanced programming techniques in a business environment. Prerequisite: EDP 109.

EDP 204—COBOL III

3 2 4

A third course in the COBOL programming language using file handling concepts, error trapping, job control language changes, and systems programming. Prerequisite: EDP 110.

EDP 116—Business BASIC Language I

3 2 4

This course is designed to provide the student with fundamental principles essential to proper programming practices including flowcharting and pseudocoding. Computer programming skills are developed through the use of the BASIC Programming Language with intense stress being placed on personal computer application in a business environment.

EDP 117—Business BASIC Language II

3 2 4

A continuation of EDP 116 with advanced BASIC concepts and commands. Systems are studied, file handling skills are developed, and typical business problems are developed. Prerequisite: EDP 116.

EDP 118—Business BASIC Language III

3 2 4

A continuation of EDP 117 designed to teach advanced system design and file handling concepts in the BASIC language. Interactive programming techniques, error checking routines, and advanced applications are stressed. A system project is assigned to simulate a business environment. Prerequisite: EDP 117.

EDP 210—LOTUS 1-2-3

3 2 4

A course designed to teach users how to use LOTUS 1-2-3, a spreadsheet, database, and graphics program. Learning will be facilitated through the solving of practical business problems in a "hands-on" environment.

EDP 212—Data Base Management

4 0 4

An introduction to using database management applications on personal computers. Creation, inquiry, updating and reporting are learned through business applications. The student will gain a working knowledge of dBase III.

EDP 221—Computer Systems

4 0 4

An advanced study of systems analysis and design with emphasis upon data systems and file organization techniques, the design of forms and methods used by the systems analyst beginning with the feasibility study and ending with project review.

EDP 230—RPG II Language I

3 2 4

A course in the Report Program Generator (RPG II) Language theory, fundamentals, and applications, including a study of the language rules and programming methods. The student will develop problem solutions and write business applications programs.

EDP 231—RPG II Language II

3 2 4

A continuation of EDP 230 where the student learns more advanced concepts in the Report Program Generator (RPG II) Language. Prerequisite: EDP 230.

EDP 232—RPG II Language III

3 2 4

An advanced course in the RPG II Language develops additional programming skills, interactive processing, file maintenance, and job control language. Prerequisite: EDP 231.

EDP 240—Computer Augmented Accounting

3 2 4

An introduction to accounting using a personal computer. It is designed to provide the student with concepts of automated accounting in the areas of general ledger, depreciation, accounts receivable, accounts payable, and payroll.

EDP 290—Advanced Computer Experience

1 6 4

This course is designed to provide the student an opportunity for advanced computer experience. Possible projects include actual work experience with designing and using current computer applications, and designing computer applications for office automation, information management systems, or decision support systems. The student will be able to learn some of the more advanced computer applications from practical experience.

EDU 121—Effective Teaching Strategies

2 0 2

Emphasis is placed on learning effective teaching techniques to enhance expertise as an instructor. Practical examples will be studied with use of videotaping to evaluate organization, techniques, and behaviors.

ELC 112—Electronics Fundamentals I

3 2 4

Presents fundamental principles of Direct Current electricity including: units of measurement, OHM's law, Kirchoff's laws, simple series, parallel, and series parallel resistive circuits, R-C & L-R circuits, power, resistance, current, capacitance, magnetism, and basic circuit components. Lab work will cover the proper use and care of hand tools, and measuring equipment such as the VOM and VTM. Interpretation of schematic diagrams and component identification, and verification of basic electrical laws will be included.

ELC 113—Electronics Fundamentals II

3 2 4

Presents fundamental principles of Alternating Current electricity including: resistive, capacitive, and inductive circuits, impedance, phase relationships, resonant and nonresonant series and parallel LRC circuits, inductive coupling, and air and iron core transformers concepts. Lab work will include use of the DVM and oscilloscope, and verification of basic electrical laws. Prerequisites: ELC 112, MAT 101.

ELC 114—Active Devices

3 2 4

Covers basics of vacuum tubes and solid state devices including: transistors, diodes, photocells, and thermistors. Lab experiments will verify the function of these components in circuits. Prerequisites: ELC 113, MAT 102.

ELC 115—Rotary Machines and Controls

3 2 4

Concepts of motor construction; power requirements; mechanical aspects of electric motors, including DC and stepping motors; and single and multiphase AC motors. The course includes wiring, testing, starting, reversing, and speed control of various types of motors. Motor control circuits include electro-mechanical and solid-state devices and timers or sequencing switches. Information also aids in proper choice of motor types for specific applications.

ELN 100—Introduction to Electronics

4 0 4

A survey of electronics with particular attention to what electronics consists of. A non-mathematical approach will be utilized in this course. Students also learn the magnitude of the Electronics Engineering Technology degree requirements.

ELN 103—Circuit Layout and Design

4 0 4

The fundamentals of drafting are presented with an emphasis on applications in the electronics field. Basic skills and techniques are included such as the use of drafting instruments, types of drawings, construction of drawings both with instruments and freehand, lettering and dimensioning, and how to read prints. In addition to basic skills, specialized experience will be included which directly relates to the electronics industry, such as types of drawings common to electronics, special symbols used, schematic diagrams, and layout diagrams with an emphasis on printed circuit work.

ELN 121—Electronic Circuits I

3 2 4

Covers the building blocks of electronics such as: power supplies, amplifiers, oscillators, feedback circuits, and tuned circuits. Lab work will give experience in building and troubleshooting these circuits. Prerequisite: ELC 113.

ELN 122—Electronic Circuits II

3 2 4

Allows the student to study the relationships of the circuits covered in ELN 121. Discussion will center around the networks formed by interconnection of these circuits. Prerequisite: ELN 121.

ELN 123—Introduction to Microprocessors

3 2 4

A study of the computer in its smallest physical form. The student will be given practice in BASIC programming and the utilization of the microprocessor in manufacturing situations.

ELN 208—Industrial Electronics

3 2 4

Electronics as applied in industrial control and production systems: study includes types of components and circuits used to control processes and equipment such as DC motors, drives, switching, and controls, high power equipment and its installation and safety considerations. Includes the study of circuits used in sensing and control as well as monitoring manufacturing processes.

ELN 218—Logic Fundamentals

3 2 4

Covers basic logic circuit design and application including: OR gates, AND gates, NOR gates, NAND gates, binary numbering systems and Boolean Algebra.

ELN 219—Pulse and Logic Circuits

3 2 4

This course continues the study of topics covered in ELN 218 and introduces bistable and monostable multivibrators, integrators, Schmitt trigger circuits, and transistor switches. Prerequisite: ELN 218.

ELN 235—Industrial Instrumentation

3 2 4

Principles of measurement of electrical values and other parameters for use in the automatic control of machinery and equipment are covered. Electronic circuits necessary for the processing of information and display are investigated. Several types of transducers for the detection and conversion of various parameters are studied and their interfacing with indicators and other systems are discussed.

ELN 241—Electronic Systems I

3 2 4

A general survey of electronic systems with emphasis on their description in block diagram format. Systems to be studied are those used in communications, computing, measurement, automatic control, and others of a specialized nature as appropriate. Prerequisite: ELN 123.

ELN 242—Electronic Systems II

3 2 4

Introduction to fundamental aspects of electronic communication systems with special emphasis on need for modulation, types of modulation, frequency spectra and bandwidth requirements. Qualitative study of the principles of AM, SSB, and FM including the generation and detection of signals and their frequency spectra. Transmission and propagation of radio signals will be studied. Prerequisite: ELN 241.

ELN 243—Electronic Systems III

3 2 4

Study of specialized electronic communication system such as TV, microwave, radar, and optical communication systems. Discussion of sampling and pulse systems including techniques of multiplexing such as PAM, PDM, PCM, and PPM. Prerequisite: ELN 242.

ELN 246—Electronic Systems Project

3 2 4

A class emphasizing independent research and design work by the student. The student will select a project in consultation with the instructor; perform the required research; compile data; formulate a theoretical model; and construct, test, and evaluate a working model of the selected project. Prerequisite: ELN 241.

ENG 100—Basic English Skills

4 0 4

A review of basic English skills which will prepare students for the competencies needed in English 101 and 102. Course content includes a study of major structural errors, grammar, mechanics, punctuation and spelling.

ENG 101—Grammar and Composition I

4 0 4

A review of English grammar, usage, methods for writing effective paragraphs and essays, and effective study skills. Special emphasis on library research, including the development of a bibliography, notetaking, outlining, and writing an abstract for a research paper to be completed in ENG 102.

ENG 102—Grammar and Composition II

4 0 4

A continuation of ENG 101 with special emphasis on expository writing and the development of skills in basic rhetoric, English grammar and usage, sentence structure, topic sentences, paragraph development, and essay development. Prerequisite: ENG 101.

ENG 103—Report Writing

4 0 4

A study of standard English and the organization and techniques of modern report writing. Exercises in developing typical reports using writing techniques and graphic devices. Special emphasis is on practical application of occupational writing demands.

ENG 104—Reading Dynamics

4 0 4

An aid to improve the student's ability to read rapidly and accurately. Special emphasis on comprehension, vocabulary, critical and analytical reading skills, and the study of reading materials related to the student's curriculum.

ENG 105—Masterpieces of World Literature

4 0 4

A study of novels, short stories, poetry, plays, and non-fiction representative of both classic and contemporary world literature.

ENG 107—Theatre Appreciation

4 0 4

A general survey of theatre history including an investigation of the origins of tragedy and comedy. A study of medieval church drama, Shakespeare, the Renaissance and Romantic traditions, Ibsen and realism, Theatre of the Absurd and some of its more recent descendants. Appropriate selections from the literature of some of the above-mentioned periods will be included.

ENG 116—Journalism I

4 0 4

A study of journalistic writing with special emphasis on collecting, writing, and editing news stories; a study of freedom of the press and basic news legality. Practical application of newswriting through the development of the college newspaper.

ENG 117—Journalism II

4 0 4

Continuation of ENG 116.

ENG 118—Publications Design and Production I	3	2	4
A study of techniques and problems in the design and production of publications, including pamphlets, brochures, catalogues, and the college yearbook.			
ENG 119—Publications Design and Production II	3	2	4
Continuation of ENG 118.			
ENG 120—Publications Design and Production III	3	2	4
Continuation of ENG 119.			
ENG 121—Publications Design and Production IV	3	2	4
Continuation of ENG 120.			
ENG 133—Composition and Documentation	4	0	4
A study of research materials (card catalog, <i>Readers' Guide to Periodical Literature</i> , dictionary, thesaurus, atlas, almanac, newspaper, encyclopedia) available in the Learning Resources Center and instruction in the use of these materials. The student will write extended compositions, summaries, and a library paper to convey an understanding of research methods.			
ENG 201—The History of the English Language	4	0	4
A study of the major developments in the English language from pre-history to the present with emphasis on American adaptations.			
ENG 203—Creative Writing	4	0	4
Creative writing laboratory. Emphasis on imaginative writing with special emphasis on essays, short stories and poetry. Prerequisite: ENG 101.			
ENG 204—Fundamentals of Speech	4	0	4
A study of basic concepts and principles of oral communication to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation.			
ENG 205—Major American Writers	4	0	4
A study of major American authors representative of literary movements from Romanticism to the present.			
ENG 206—Voice and Diction	4	0	4
A beginning course designed to assist the student to improve the personal use of one's voice.			
ENG 207—Southern American Writers	4	0	4
A study of principal authors, from colonial times to the present, who have made a contribution to a better understanding of the people and institutions of the South.			
ENG 209—Creative Writing Workshop	4	0	4
Continuation of ENG 203—Creative Writing. ENG 203—Creative Writing is a didactic course. ENG 209—Creative Writing Workshop will be responsible for all phases of the publication of the literary magazine <i>Foothill Notes</i> ; i.e., writing, editing, typing, distributing, etc.			

ENG 210—Effective Communication	2	0	2
A course designed to help participants understand their own communication problems, overcome or prevent communication breakdowns, and improve their relationships with others through more effective listening and speaking skills.			
ENG 220—Reading in the Content Areas	2	0	2
This course, which provides instruction in the teaching of reading in the content areas (such as history, science, social studies), is designed for classroom teachers who teach at the junior high, senior high, or adult level. Basic theories and their practical applications to teaching are emphasized. Topics include informal testing, textbook selection, making effective reading assignments, teaching students how to study, and designing strategies for presenting textbook content to students.			
ENV 206—Environmental Law	4	0	4
A study of local, state, and federal laws and acts concerning environmental quality standards and the use of resources, legal procedure for enforcing laws, and problems concerning enforcement. Included will be environmental standards dealing with polluting sources such as industry, agriculture, municipalities, and individuals.			
FAS 101—Principles of Fashion Merchandising	4	0	4
This course is designed as an introduction to fashion terminology and the components of fashion. It explores the manner in which economic, sociological, and psychological factors influence fashion demand. A brief history of fashion is discussed along with the roles and responsibilities of designers, manufacturers, and retailers. Great emphasis is also placed on careers in fashion.			
FAS 102—Modeling and Social Usage	2	2	3
This course is designed as an introduction to the techniques and skills needed to improve one's stance, posture, carriage and body control and business manners in order that each student can better meet the requirements they will face in the business world.			
FAS 103—Fashion Accessories	4	0	4
Concerns itself with properties, characteristics, and construction of leather, fur, hosiery, intimate apparel, belts, umbrellas, millinery, wigs, jewelry, and cosmetics as they affect the knowledgeable buying and selling of these products.			
FAS 104—Fashion Sketching	2	0	2
To help students develop fashion sketching techniques for promotion designs which are already complete, for illustrations in magazines, newspapers, poster design, display, etc. Enables students to acquire knowledge of figure proportions.			
FAS 105—Professional Development	4	0	4
This course stresses the individual development of the student's potential in enhancing and training mind and body in the following areas: self-esteem and personality, physical conditioning, nutrition and diet, clothing and appearance, habits or orderliness, overall grooming, graciousness, manners, and consumer awareness.			

FAS 106—Fabric Science	4	0	4
Analyzes textile fibers and the construction of fabrics, with emphasis on the properties that affect their hand, appearance, performance and end use.			
FAS 208—Fashion Salesmanship	4	0	4
This course will analyze the basics and nature of selling. The course will study the consumer buying habit, behavior and communications process. A thorough study of the importance of personal selling to our socioeconomic system, the way culture influences the behavior of buyers, background information a salesperson should have, techniques and sources of information for identifying prospects, and characteristics for special types of selling and the building of a sales force.			
FAS 209—Fashion Writing and Communication	4	0	4
Examines specific areas of fashion writing, such as: Fashion reports, press release, fashion news stories, fashion and trade magazine articles, and fashion show commentary.			
FAS 210—Fashion Advertising and Sales Promotion	4	0	4
This course will serve as an introduction to sales promotion activities for all marketing levels with concentration on the specialized techniques and procedures employed to implement the activities of advertising and copy-writing. It will cover the types and objectives of the different sales promotion activities used to sell fashion products and the techniques that are important to implement fashion shows, special events and publicity.			
FAS 211—Introduction to Apparel Design	4	0	4
This course examines the job of the designer, how the designer functions in the context of an apparel manufacturing firm, the mechanics of creation and production, and the principles and elements of design.			
FAS 212—Psychology of Dress	4	0	4
Examines the interrelationship between clothing and its cultural, social, psychological, physical economic, and aesthetic implications.			
FAS 215—New York Field Studies Seminar	1	6	3
Four days and three nights to New York City's Garment District. To offer students of design, retailing and merchandising a behind-the-scenes look at the fashion industry along with new perspectives on fashion careers. Institutional visits to the Metropolitan Museum's Costume Collection, other museums and the Fashion Group Headquarters. Company visits to design studios, showrooms and factories of apparel-makers, fur, lingerie and accessories, fashion publications and other establishments. Offered upon sufficient enrollment demand once every two years.			
HIS 101—World Civilization I	4	0	4
A survey of the cultural beginning of Eastern and Western civilizations, dealing with migrations, cultural diffusion, and the development of governmental and ethical structures through the fall of the Roman Empire.			

HIS 102—World Civilization II

4 0 4

A continuation of HIS 101 from the Middle Ages, through the Renaissance, the Voyages of Discovery, Colonization, the Reformation and the Age of Enlightenment.

HIS 103—World Civilization III

4 0 4

A continuation beginning with the Industrial Revolution, the impact of industrial imperialism, the American and French Revolutions; the rise of political democracy and modern nationalism to the present.

HIS 110—American History I

4 0 4

A comprehensive survey of American History from colonial times through the Civil War. It is a study of the political and social history of a pluralistic society with emphasis upon manners, mores, literary and artistic movements, religions and philosophical schools of thought, and the general outlook of the American people on particular subjects.

HIS 111—American History II

4 0 4

A continuation of American History I, beginning with the reconstruction period after the Civil War and proceeding through history up to the present.

HIS 112—American History III

4 0 4

A continuation of American History I and American History II. An in-depth study of the United States Supreme Court Justices and landmark decisions, especially those decisions affecting educational institutions.

HUM 101—Dimensions of Human Experience

4 0 4

An interdisciplinary course in the humanities emphasizing some of the major dimensions of human experience, as reflected in philosophy, art, literature, music, history, religion, and psychology.

HUM 103—Major World Religions

4 0 4

A comparative religion course examining six major religions: Hinduism, Buddhism, Zoroastrianism, Islam, Judaism, and Christianity.

HUM 110—History of Dress

4 0 4

A study of the costumes of the ancient world, Europe and America and the effects of the social environment upon appearance and the evolution of garments with special emphasis on the influence of history on modern concepts of dress.

ISC 107—Occupational Safety and Health Act

4 0 4

A survey of the Williams-Steiger Occupational Safety and Health Act of 1970. Application of the Federal Standards in various industries.

ISC 120—Principles of Industrial Management I

4 0 4

The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization; problems of factory organization and control, planning, scheduling, routing factory production, and labor control.

ISC 121—Principles of Industrial Management II	4	0	4
Continuation of Principles of Industrial Management I. Prerequisite: ISC 120.			
ISC 122—Industrial Drawing	4	0	4
Drafting fundamentals and blueprints interpreting techniques common to commercial buildings covered from a safety technician's point of view. Schematics and diagrams to include electrical, plumbing, and heating installations using appropriate symbols and notes.			
ISC 209—Plant Layout	4	0	4
A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium-sized plant, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money, and materials in a manufacturing operation.			
ISC 211—Work Measurement	4	0	4
Principles of work simplification including administration of job methods improvement, motion study fundamentals and time study techniques, use of flow and process charts; multiple activity charts, operations charts, flow diagrams and methods of evaluation are studied.			
ISC 213—Production Planning	4	0	4
Day to day plant direction; forecasting, product planning and control, scheduling, dispatching, work loading. Routing and inventory control are studied.			
ISC 218—Plant Security	4	0	4
Survey of the organization and function of the plant security force. Items stressed include: entrance procedures, petty thievery of company owned materials, parking lot security, use of fire arms in an emergency situation, disaster preparedness, and handling of bomb scares.			
ISC 220—Management Problems	4	0	4
A study of personnel and production problems from the standpoint of middle management. Includes selection and development of products, control problems and techniques, development of standards, employer-employee relations. Case studies are extensively utilized.			
ISC 224—Elements of Industrial Hygiene	4	0	4
Course designed to develop understanding of broad concepts of industrial hygiene and to develop ability to recognize potentially hazardous environmental conditions. A survey of the effects of toxic agents on the body and general methods of control will be included.			
ISC 243—Free Enterprise	4	0	4
An in-depth examination of the component parts of free market capitalism and the complex interaction of producer, consumer and government. The fundamental principles which have contributed so vitally to the economic and industrial preeminence of the United States are employed. Some of these are relying on the industrial keeping government in its place, and the encouragement of productivity and ingenuity by the worker.			

MAT 100—Basic Arithmetic Skills

4 0 4

A review course in the principles and manipulations of arithmetic operations. Topics of study include: whole numbers, fractions, decimals, factoring, and simple applications of these areas.

MAT 101—Principles of Mathematics

4 0 4

A course emphasizing applications of mathematics and geometry. Topics of study include: geometry of plane figures, ratios and proportion, percents, use of calculator, powers and roots, and the metric system of measurement. Prerequisite: MAT 100 or equivalent.

MAT 102—Algebra I

4 0 4

An introductory course acquainting students with the basic principles of the study and application of algebra. Topics of study include: The equation, signed numbers, monomials, polynomials, graphing and set theory. Prerequisite: MAT 101 or equivalent.

MAT 117—Introduction to Statistics

4 0 4

An elementary course concerning the basic concepts of probability theory and the methods of statistical inference. Topics of study include: Sets and functions, probability, sampling, parameters and normal probability distribution. Prerequisite: MAT 102 or equivalent.

MAT 131—Algebra II

4 0 4

A study of the manipulation of polynomials, rational expressions, and solutions of equations. Topics of study to include: linear equations, inequalities, exponents, polynomials, rational expressions, powers, roots, radicals, quadratics, and logarithmic functions. Prerequisite: MAT 102.

MAT 132—Trigonometry

4 0 4

An intermediate course in the principles and applications of trigonometric functions and algebraic manipulations of trigonometric functions. Outline of study includes: trigonometric functions, solution of triangles, radian measure, trigonometric identities and inverse trigonometric functions. Prerequisite: MAT 102 or equivalent.

MAT 134—Algebra III

4 0 4

A study of the solution of equations and systems of equations through advanced algebraic techniques. Outline of study includes: functions, graphing, operations with polynomials, solution of quadratics, linear equations, inequalities, matrices, determinants and exponential and logarithmic functions. Prerequisite: MAT 131.

MAT 201—Differential Calculus

4 0 4

A course in the principles, concepts, and applications of differential calculus. Outline of study includes: limits, continuity, derivation, and application of the derivative. Prerequisite: MAT 131 or equivalent.

MAT 202—Calculus and Analytic Geometry

4 0 4

The study of the properties and application of the derivative with emphasis on: conic sections, transcendental function, exponential and logarithmic functions. Prerequisite: MAT 201.

✓MAT 203—Integral Calculus

4 0 4

The study of the properties and applications of integral calculus with emphasis on: vectors and solid analytical geometry, partial differentiation, multiple integral and vector calculus. Prerequisite: MAT 202 or equivalent.

✓MAT 210—College Math for Teachers

2 0 2

A survey course that explains the development of our number system—from natural numbers, to geometry, to logarithms, to calculus, to modern algebra.

MUS 100—Voice

4 0 4

A beginner's introduction to vocal technique and style. The course covers the fundamentals of vocal production. It is geared toward those who have had no previous vocal training.

✓MUS 101—Music Appreciation

4 0 4

A basic orientation to music with emphasis on simple form and analysis, instrumentation aesthetics, masterpieces and other significant works.

MUS 201—Music of the Twentieth Century

4 0 4

A survey and analysis of twentieth century music expression with emphasis on style and usage in relation to our culture.

MUS 202—Music Theater

4 0 4

An emphasis on all aspects of musical theater and opportunities for participation will be available to all students regardless of music experience or ability.

MUS 203—Modern Dance

4 0 4

The study of the communicative potential of modern dance with emphasis on the power of human movement to reveal different moods, feelings, and ideas.

NUT 101—Nutrition and Diet Therapy

3 0 3

The course focuses on the nutritional requirements of growth and the contribution to good health by proper nutrition. The harmful effects of inadequate diet are discussed. Fundamentals of normal nutrition are used to introduce the student to diet changes made necessary by illness. The principles of meal planning and the selection, preparation, and storage of foods are included.

PHI 101—Introduction to Philosophy

4 0 4

A survey course of major philosophical writings from ancient to modern times, with special emphasis on philosophical concepts including naturalism, idealism, systematic philosophy, realism, British empiricism, and existentialism. Representative thinkers include Plato, Decartes, Berkeley, Kant, Aristotle, St. Augustine, Hegel, Bacon, Kirkegaard, Sarte, and Camus.

PHY 107—General Physics

4 0 0 4

This course is designed to take the student from basic fundamentals through advanced physics covering such areas as: Structure of matter; electric current; electrostatics, units of measurement; electrodynamics; magnetism and electromagnetism, electric generators and motors.

PHY 108—Radiation Physics	3	2	0	4
The production and control of high voltage and rectification; x-ray tubes and rectifiers and an introduction to therapy and nuclear medicine. Prerequisite: PHY 107.				
PHY 201—Physics I	3	2	4	
The first quarter of college physics; mechanics (with emphasis on measurement); vectors and scalars; force systems, translational and rotational motion; work and energy; hydraulics. Prerequisite: MAT 102.				
PHY 202—Physics II	3	2	4	
The second quarter of college physics; kinetic theory of matter, heat, thermodynamics, wave motion and sound, and the properties of light. Prerequisite: PHY 201.				
PHY 203—Physics III	3	2	4	
The third quarter of college physics: electricity and magnetism—static electricity, potential, Ohm's law, parallel and series circuits, Kirchoff's Laws, magnets, induced electromotive force, motors and generators. Also modern physics: relativity; bohr atom, x-ray and gamma rays, and atomic structure. Prerequisite: PHY 202.				
POL 102—Government—National	4	0	4	
English and Colonial background, the Articles of Confederation and the framing of the Federal constitution will be discussed. The nature of the Federal Union, Federal powers, political parties will be studied, as will the general organization and functions of the national government.				
POL 103—Government—State and Local	4	0	4	
A study of state government, state-federal inter-relationships, the functions and prerogatives of the branches will be made. Problems of administration, legal procedures, law enforcement, police power, revenues and appropriations, with special attention to North Carolina will be discussed.				
POL 204—Great Decisions—Foreign Policy	4	0	4	
A discussion of key foreign policy issues faced by the United States and its citizens of the current year.				
PSY 101—Introduction to Psychology	4	0	4	
A survey of major psychological theories (behavioral, cognitive, psychoanalytic, and humanistic) including the developmental process, motivation, emotion, frustration and adjustment, attention and perception, and problems of group living. Attention is given to application of these topics, to problems of study, self-understanding, and adjustment to demands of society.				
PSY 103—Adolescent Psychology	4	0	4	
A study of the nature and source of the problems of adolescents in western culture; physical, emotional, social, intellectual, and personality development and adolescents.				
PSY 201—Abnormal Psychology	4	0	4	
Abnormal behavior studied in the context of modern life: Case studies, differential diagnosis, psychological dynamics of abnormal behavior, including theoretical, clinical and experimental contributions in the field.				
PSY 202—Group Processes	4	0	4	
A study of dynamics and leadership roles utilizing group experimentations. Applicability to other settings is also explored.				

PSY 208—Human Growth and Development	4	0	4
A developmental approach in examining processes of growth physically, intellectually, psychologically, and socially. Covers infancy, adolescence, adulthood, and aging.			
PSY 209—Living with Ten-to-Fifteen Year Olds	2	0	2
The study of the processes of development for a specific age group, such as adolescence. (Only one age grouping will be covered each time the course is taught and will depend upon interest.)			
PSY 238—Dynamics of Group Encounter	4	0	0
A close-in-depth study of sensitivity training. Student participation will enhance this course in actual group situations in the prison setting. Exploration of group behavior of others and role playing techniques of incarcerated individuals is analyzed along with the dynamics of group relations and interrelations.			
RAD 101—Positioning I	3	2	0
This course will cover basic radiographic positions for the upper and lower extremities. Basic radiographic terminology will be taught.			
RAD 102—Principles of Radiographic Technique I	3	2	0
The student will be taught the fundamental principles of Radiographic exposure. This course will include all technical information of proper contrast and technical selections needed for Radiography conversion of techniques, evaluation of technical quality, and technical changes necessary to improve quality.			
RAD 103—Processing Technique	2	2	0
This course will deal with manual and automatic processing with film critique for darkroom application. All studies of chemistry and all stages of processing will be taught.			
RAD 104—Radiographic Anatomy	4	0	4
A study of the anatomy of the nine systems of the Body with special emphasis on the skeletal system.			
RAD 105—Critique I	1	0	0
Evaluation of repeated radiographs and high quality radiographs to instruct students in prevention of technical and positioning errors and how to attain top quality in Radiography. Special emphasis will be placed on position taught in Positioning I.			
RAD 106—Clinical I	0	0	15
Practical experience in a clinical setting. This experience will include practice in ethical and attitudinal situations during patient contact, patient care and basic positioning for radiologic studies of the chest, upper and lower limbs, and the abdomen. The student will process radiographs and apply basic principles in radiographic exposure. Departmental professional procedures will be initiated into the student's clinical routine.			

RAD 110—Introduction to Radiologic Technology 1 0 0 1
An introduction to the field of Radiology with an overall view of Radiologic Technology and the part Radiology plays in medicine. The student will become completely acquainted with the ethics and basic radiation protection and will be acquainted with the administrative structure of the hospital and departmental functions.

RAD 111—Positioning II 3 2 0 4
This course will cover basic radiographic positions of the spine and skull. Prerequisite: RAD 101.

RAD 112—Principles of Radiographic Technique II 2 2 0 3
Advanced formulation of techniques for all phases of radiography. Experimentation on various technical procedures with written reports to coordinate results of experiments. Prerequisite: RAD 102.

RAD 113—Critique II 1 0 0 1
A continuation of Critique I with special emphasis on positions taught in Positioning II.

RAD 114—Clinical II 0 0 15 5
The student will apply, in the hospital, what has been learned in class. All students will be under the supervision of an instructor or a registered technologist.

RAD 121—Positioning III 3 2 0 4
This course will cover basic radiographic positions of examinations using contrast media and advance skull positioning. Prerequisite: RAD 111.

RAD 123—Critique III 1 0 0 1
A continuation of Critique II with special emphasis on positions taught in Positioning III.

RAD 124—Clinical III 0 0 24 8
Continuation of supervised and more critical evaluation of the students practicum within the position.

RAD 131—Positioning IV 3 2 0 4
The final study of radiographic positioning other than the routine positions and pediatric radiography. Prerequisite: RAD 121.

RAD 134—Clinical IV 0 0 24 8
Intensified practicum in the hospital to apply all the didactical knowledge the student has acquired in the past year.

RAD 141—Special Procedure I 2 0 0 2
Detailed studies of special procedures, the related contrast media used, pathology demonstrated and anatomy demonstrated.

RAD 201—Radiologic Protection 2 0 0 2
This course will deal with the effects of radiation on the body, ways of patient and personal protection and governmental regulations.

RAD 203—Clinical V	0	0	24	8
Continuation of Practicum with emphasis on finer details of improvements to attain a high quality in practicum.				
RAD 212—Clinical VI	0	0	24	8
Practicum with emphasis on special procedures and examinations not commonly performed on a routine basis.				
RAD 223—Clinical VII	0	0	30	10
Detailed practicum as a prerequisite for final evaluation.				
RAD 233—Clinical VIII	0	0	39	13
Practicum within the hospital with oral and practical examination. General evaluation of the student's practicum capabilities will be summarized.				
RAD 241—Special Procedures II	2	0	0	2
A continuation of Special Procedures I.				
RAD 245—Seminar I	1	0	0	1
A general course that will prepare the student for national certification.				
RAD 246—Seminar II	1	0	0	1
A continuation of RAD 245.				
SOC 101—Introduction to Sociology	4	0	4	
An introductory course in the principles of sociology, culture, personality development, social class, and social control. Presents the scientific study of man's behavior in relation to other men, the general laws affecting the organization of such relationships, and the effects of social life on human personality and behavior.				
SOC 202—Marriage and Family	4	0	4	
A course designed to provide understanding of family relationships; a functional approach to the interpersonal relationships of courtship, marriage, and family life.				
SOC 203—Contemporary Issues	4	0	4	
A culminating interdisciplinary course dealing with basic economic, social, scientific and moral issues confronting human society.				
SOC 208—Black Studies	4	0	4	
This course is designed to provide opportunities for students to review, discuss and evaluate the experience of Black Americans through the use of films, filmstrips, records, and tapes as well as selected readings, from autobiographies and biographies of distinguished Black Americans, historical records and documents and outstanding works of literature and art. Resource people in the community are used whenever possible.				

ALLIED SERVICES DEPARTMENT

ASSOCIATE IN APPLIED SCIENCE DEGREE

ELECTRONICS ENGINEERING TECHNOLOGY (T-045)

The Electronics curriculum provides a basic background in electronic related theory, with practical applications of electronics for business and industry. Courses are designed to develop competent electronics technicians who may work as assistants to engineers or as liaisons between engineers and skilled craft workers.

The electronics technician will start in one or more of the following areas: research, design, development, production, maintenance or sales. The graduate may begin as an electronics technician, an engineering aide, laboratory technician, supervisor or equipment specialist.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

			Hours			
			Title	Class	Lab	Credit
ELC	112	Electronic Fundamentals I		3	2	4
ELC	113	Electronic Fundamentals II		3	2	4
ELC	114	Active Devices		3	2	4
ELC	115	Rotary Machines and Controls		3	2	4
ELN	100	Introduction to Electronics		4	0	4
ELN	103	Circuit Layout and Design		3	2	4
ELN	121	Electronic Circuits I		3	2	4
ELN	122	Electronic Circuits II		3	2	4
ELN	123	Introduction to Microprocessors		3	2	4
ELN	208	Industrial Electronics		3	2	4
ELN	218	Logic Fundamentals		3	2	4
ELN	219	Pulse and Logic Circuits		3	2	4
ELN	235	Industrial Instrumentation		3	2	4
ELN	241	Electronic Systems I		3	2	4
ELN	242	Electronic Systems II		3	2	4
ELN	243	Electronic Systems III		3	2	4
ELN	246	Electronic Systems Project		3	2	4
				52	32	68

RELATED COURSES:

EDP	116	Business Basic Language I	3	2	4
MAT	101	Principles of Math	4	0	4
MAT	102	Algebra I	4	0	4
MAT	131	Algebra II	4	0	4
MAT	132	Trigonometry	4	0	4
PHY	201	Physics I	3	2	4
PHY	202	Physics II	3	2	4
PHY	203	Physics III	3	2	4
			28	8	32

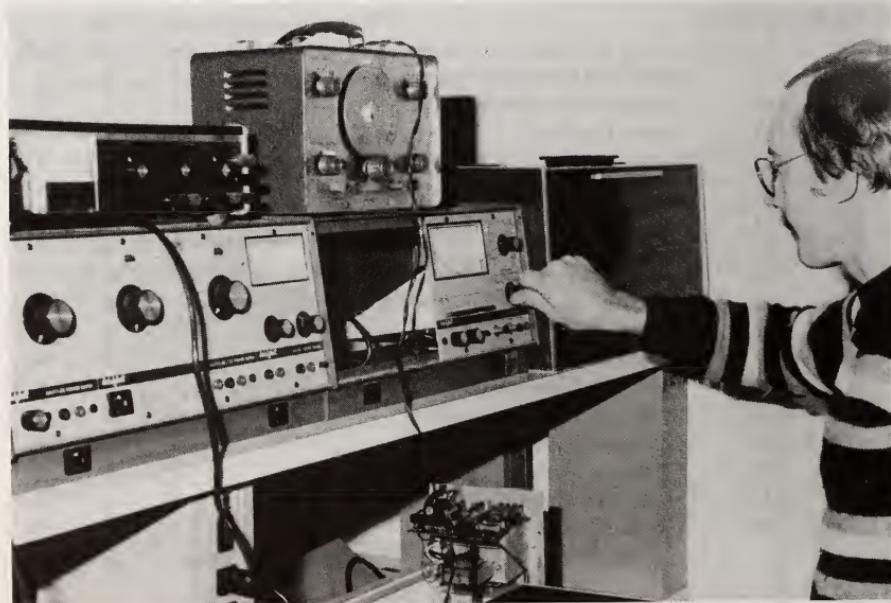
GENERAL EDUCATION:

ART	101	Art Appreciation	4	0	4
ENG	101	Grammar & Composition I	4	0	4
ENG	102	Grammar & Composition II	4	0	4
PSY	101	Introduction to Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			20	0	20

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 124



DIPLOMA CREDIT PROGRAMS



VOCATIONAL DIPLOMAS

AIR CONDITIONING, HEATING, AND REFRIGERATION (V-024)

The Air Conditioning, Heating, and Refrigeration curriculum develops an understanding of the basic principles involved in the construction, installation, operation and maintenance of climate control equipment. Courses in blueprint reading, duct construction, welding, circuits and controls, math, science and general education are included to help provide supporting skills necessary for the mechanic to function successfully in the trade.

The air conditioning, heating, and refrigeration mechanic installs, maintains, services, and repairs environmental control systems in residences, department and food stores, office buildings, industries, restaurants, institutions, and commercial establishments. Job opportunities exist with companies that specialize in air conditioning, heating, and commercial refrigeration installation service. The graduate should be able to assist in installing mechanical equipment, duct work, and electrical controls necessary in residential and commercial projects. With experience the graduate should be able to service various air conditioning, heating, and refrigeration components; troubleshoot systems; and provide the preventative maintenance required by mechanical equipment. This person may be employed in areas of maintenance, installation, sales, and service in the field of air conditioning, heating and cooling.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
AHR	1121	Principles of Refrigeration	2	6	4
DFT	110	Introduction to Drafting	4	0	4
ELC	1102	Basic Electricity for Air Conditioning, Heating and Refrigeration	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
WLD	1101	Basic Gas Welding	1	3	2
			13	15	18
Winter Quarter					
AHR	1115	Fundamentals of Heating	2	6	4
PHY	1101	Applied Physics	4	0	4
AHR	1123	Principles of Air Conditioning I	2	6	4
DFT	1116	Blueprint Reading: Air Conditioning	4	0	4
ISC	1101	General Industrial Survey	4	0	4
			16	12	20

Spring Quarter

AHR	1128	Automatic Controls	2	6	4
ENG	1102	Communication Skills	4	0	4
AHR	1126	All Year Comfort Systems	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>

Summer Quarter

AHR	1122	Domestic and Commercial Refrigeration	2	6	4
AHR	1131	State AC, Heat, Refrig. License Law	4	0	4
AHR	1124	Air Condition and Refrigeration Servicing	2	6	4
AHR	1130	Year Around Duct System Design	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>

Total hours required for graduation = 70

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
AHR	1121	Principles of Refrigeration	2	6	4
DFT	110	Introduction to Drafting	4	0	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>

Winter Quarter

ELC	1102	Basic Electricity for Air Conditioning, Heating and Refrigeration	2	6	4
ISC	1101	General Industrial Survey	4	0	4
WLD	1101	Basic Gas Welding	1	3	2
			<u>7</u>	<u>9</u>	<u>10</u>

Spring Quarter

AHR	1115	Fundamentals of Heating	2	6	4
DFT	1116	Blueprint Reading: Air Conditioning	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

AHR	1123	Principles of Air Conditioning I	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Fall Quarter

AHR	1128	Automatic Controls	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

AHR	1126	All Year Comfort Systems	2	6	4
PSY	1101	Human Relations	4	0	4
			6	6	8

Spring Quarter

AHR	1122	Domestic and Commercial Refrigeration	2	6	4
AHR	1131	State AC, Heat, Refrig. License Law	4	0	4
			6	6	8

Summer Quarter

AHR	1124	Air Condition and Refrigeration Servicing	2	6	4
AHR	1130	Year Around Duct System Design	4	0	4
			6	6	8

Total hours required for graduation = 70



AUTO BODY REPAIR (V-001)

The Automotive Body Repair curriculum provides training in the use of the equipment and materials of the auto body mechanic trade. The student studies the construction of the automobile body and techniques of auto body repairing, rebuilding and refinishing.

Repairing, straightening, aligning, metal finishing and painting of automobile bodies and frames are typical jobs performed. Job titles include automobile body repairperson, automotive painter, and frame and chassis repairperson. Persons completing this curriculum may find employment with franchised automobile dealers, independent garages, or may start their own business.

COURSE AND HOUR REQUIREMENTS

DAY SEQUENCE

Fall Quarter	Title	Hours		
		Class	Shop	Credit
AUT 1111	Auto Body Repair I	2	6	4
AUT 1311	Auto Body Repair II	3	9	6
MAT 1101	Vocational Basic Arithmetic	4	0	4
DFT 110	Introduction to Drafting	4	0	4
		13	15	18
Winter Quarter				
AUT 1112	Auto Body Repair III	2	6	4
AUT 1312	Auto Body Repair IV	3	9	6
PHY 1101	Applied Physics	4	0	4
WLD 1105	Auto Body Welding	1	3	2
		10	18	16
Spring Quarter				
AUT 1113	Metal Finishing and Painting I	2	6	4
AUT 1313	Metal Finishing and Painting II	3	9	6
ENG 1102	Communication Skills	4	0	4
ISC 1101	General Industrial Survey	4	0	4
		13	15	18
Summer Quarter				
AUT 1114	Body Shop Applications I	2	6	4
AUT 1314	Body Shop Applications II	3	9	6
PSY 1101	Human Relations	4	0	4
BUS 287	Small Business Management	4	0	4
		13	15	18

Total hours required for graduation = 70

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
AUT	1111	Auto Body Repair I	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
			6	6	8
Winter Quarter					
AUT	1311	Auto Body Repair II	3	9	6
DFT	110	Introduction to Drafting	4	0	4
			7	9	10
Spring Quarter					
AUT	1112	Auto Body Repair III	2	6	4
PHY	1101	Applied Physics	4	0	4
			6	6	8
Summer Quarter					
AUT	1312	Auto Body Repair IV	3	9	6
WLD	1105	Auto Body Welding	1	3	2
			4	12	8
Fall Quarter					
AUT	1113	Metal Finishing and Painting I	2	6	4
ISC	1101	General Industrial Survey	4	0	4
			6	6	8
Winter Quarter					
AUT	1313	Metal Finishing and Painting II	3	9	6
ENG	1102	Communication Skills	4	0	4
			7	9	10
Spring Quarter					
AUT	1114	Body Shop Applications I	2	6	4
PSY	1101	Human Relations	4	0	4
			6	6	8
Summer Quarter					
AUT	1314	Body Shop Applications II	3	9	6
BUS	287	Small Business Management	4	0	4
			7	9	10

Total hours required for graduation = 70

Electives can be chosen from other curriculum course offerings in the catalog (subject to the Department Head's approval).

AUTOMOTIVE MECHANICS

(V-003)

The Automotive Mechanics curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair and adjust automotive vehicles. Manual skills are developed in practical shop work and the technical understanding of the operating principles involved in the modern automobile are taught through class assignments, discussions and shop practices.

Automobile mechanics maintain and repair mechanical, electrical and body parts of passenger cars, trucks and buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition and use shop manuals and other technical publications as references for technical data. Persons completing this curriculum may find employment with franchised automobile dealers, independent garages, or may start their own business.

COURSE AND HOUR REQUIREMENTS

DAY SEQUENCE

		Title	Hours		
Fall Quarter			Class	Shop	Credit
PME	1101	Internal Combustion Engines I	5	3	6
MEC	1199	Automotive Machine Shop	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
DFT	110	Introduction to Drafting	4	0	4
			15	9	18
Winter Quarter		Title	Hours	Hours	Hours
PME	1301				
PME	1103				
PHY	1101				
			2	6	4
			5	3	6
			4	0	4
			11	9	14
Spring Quarter		Title	Hours	Hours	Hours
AUT	1123				
AHR	1101				
ENG	1102				
PME	1227				
			2	6	4
			2	6	4
			4	0	4
			1	3	2
			9	15	14
Summer Quarter		Title	Hours	Hours	Hours
PME	1302				
PME	1102				
PME	1221				
PSY	1101				
			5	3	6
			5	3	6
			2	6	4
			4	0	4
			16	12	20

Total hours required for graduation = 66

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
PME	1101	Internal Combustion Engines I	5	3	6
MAT	1101	Vocational Basic Arithmetic	4	0	4
DFT	110	Introduction to Drafting	4	0	4
			<u>13</u>	<u>3</u>	<u>14</u>
Winter Quarter					
MEC	1199	Automotive Machine Shop	<u>2</u>	<u>6</u>	<u>4</u>
			<u>2</u>	<u>6</u>	<u>4</u>
Spring Quarter					
PME	1301	Internal Combustion Engines II	2	6	4
PHY	1101	Applied Physics	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Summer Quarter					
PME	1103	Automotive Analyzing Equipment	5	3	6
PME	1227	Power Accessories	4	0	4
			<u>9</u>	<u>3</u>	<u>10</u>
Fall Quarter					
AUT	1123	Brakes	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Winter Quarter					
AHR	1101	Auto Air Conditioning	2	6	4
			<u>2</u>	<u>6</u>	<u>4</u>
Spring Quarter					
PME	1302	Fuel Systems	5	3	6
PSY	1101	Human Relations	4	0	4
			<u>9</u>	<u>3</u>	<u>10</u>
Summer Quarter					
PME	1102	Engine Electrical Systems	5	3	6
PME	1221	Front Alignment	2	6	4
			<u>7</u>	<u>9</u>	<u>10</u>

Total hours required for graduation = 66

Electives can be chosen from other curriculum course offerings in the catalog (subject to Department Head's approval).

CARPENTRY AND CABINETMAKING (V-007)

Carpenters construct, erect, install and repair structures of wood, plywood and wallboard, using hand and power tools. This curriculum in carpentry is designed to prepare individuals with skills and knowledge of construction with wood. The curriculum includes mathematics, blueprint reading, methods of construction, information on building materials, and energy efficient construction.

Carpenters work on new construction and maintain and repair many types of existing structures, both residential and commercial. They have an understanding of building materials; concrete form construction; rough framing; roof and stair construction; the application of interior and exterior trim, insulation, and other energy saving materials; and the installation of cabinets and fixtures.

Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job may be designated according to the specialty as rough carpenter, framing carpenter, form carpenter, scaffolding carpenter, acoustical insulating carpenter and finish carpenter.

COURSE AND HOUR REQUIREMENTS

			Hours		
			Class	Shop	Credit
Fall Quarter					
CAR 1101	Carpentry I		2	6	4
CAR 1301	Carpentry II		2	6	4
CAR 1001	Blueprint Layout and Design		4	0	4
MAT 1101	Vocational Basic Arithmetic		4	0	4
			12	12	16
Winter Quarter					
CAR 1102	Carpentry III		2	6	4
CAR 1302	Carpentry IV		2	6	4
MAT 1112	Construction Estimating		4	0	4
CAR 1306	Introduction to Woodworking		4	0	4
			12	12	16
Spring Quarter					
CAR 1103	Carpentry V		2	6	4
CAR 1303	Carpentry VI		2	6	4
ENG 1102	Communication Skills		4	0	4
MEC 1135	Mechanical Installation		4	0	4
BUS 287	Small Business Management		4	0	4
			16	12	20
Summer Quarter					
CAR 1104	Carpentry VII		2	6	4
CAR 1304	Carpentry VIII		2	6	4
CAR 1305	Building Code		4	0	4
PSY 1101	Human Relations		4	0	4
CAR 1106	Construction Seminar		4	0	4
			16	12	20

Total hours required for graduation = 72

DIESEL VEHICLE (TRUCK) MAINTENANCE (V-013)

The Diesel Vehicle Maintenance curriculum provides a program for developing the basic knowledge and skills needed in diesel vehicle maintenance. Manual skills are developed in practical shop work.

Diesel engines are found in farm and construction equipment, electrical generators, trucks, buses, trains, automobiles and ships. Many diesel vehicle mechanics specialize in maintenance and repair of equipment; others specialize in rebuilding engines.

Diesel vehicle mechanics are instructed through class assignments, discussion and shop practice to maintain and repair engines, chassis and suspensions, and power trains used to power farm equipment, construction equipment, buses and trucks. They use handtools, precision measuring and testing instruments, and power tools in overhauling and maintaining diesel powered equipment.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter	Title				
DSL 1101	Diesel Engines I		2	6	4
DSL 1102	Diesel Engines II		3	9	6
MAT 1101	Vocational Basic Arithmetic		4	0	4
DFT 110	Introduction to Drafting		4	0	4
WLD 1101	Basic Gas Welding		1	3	2
			14	18	20
Winter Quarter					
DSL 1103	Diesel Electrical, Fuel and Air Conditioning Systems I		2	6	4
DSL 1104	Diesel Electrical, Fuel and Air Conditioning Systems II		3	9	6
PHY 1101	Applied Physics		4	0	4
PME 1227	Power Accessories		1	3	2
DFT 1104	Blueprint Reading: Mechanical		4	0	4
			14	18	20
Spring Quarter					
DSL 1105	Diesel Truck Chassis, Suspension and Brakes I		2	6	4
DSL 1106	Diesel Truck Chassis, Suspension and Brakes II		3	9	6
ENG 1102	Communication Skills		4	0	4
COE 101	Work Experience (or elective)		3	0	3
			12	15	17

Summer Quarter

DSL	1107	Power Trains I	2	6	4
DSL	1108	Power Trains II	3	9	6
PSY	1101	Human Relations	4	0	4
BUS	287	Small Business Management	4	0	4
			13	15	18

Total hours required for graduation = 75

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
DSL	1101	Diesel Engines I	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
DFT	110	Introduction to Drafting	4	0	4
			10	6	12

Winter Quarter

DSL	1102	Diesel Engines II	3	9	6
WLD	1101	Basic Gas Welding	1	3	2
			4	12	8

Spring Quarter

DSL	1103	Diesel Electrical, Fuel and Air Conditioning Systems I	2	6	4
PME	1227	Power Accessories	1	3	2
			3	9	6

Summer Quarter

DSL	1104	Diesel Electrical, Fuel and Air Conditioning Systems II	3	9	6
PHY	1101	Applied Physics	4	0	4
DFT	1104	Blueprint Reading: Mechanical	4	0	4
			11	9	14

Fall Quarter

DSL	1105	Diesel Truck Chassis, Suspension and Brakes I	2	6	4
ENG	1102	Communication Skills	4	0	4
			6	6	8

Winter Quarter

DSL	1106	Diesel Truck Chassis, Suspension and Brakes II	3	9	6
COE	101	Work Experience (or elective)	3	0	3
			6	9	9

Spring Quarter

DSL	1107	Power Trains I	2	6	4
PSY	1101	Human Relations	4	0	4
			6	6	8

Summer Quarter

DSL	1108	Power Trains II	3	9	6
BUS	287	Small Business Management	4	0	4
			7	9	10

Total hours required for graduation = 75

ELECTRICAL INSTALLATION AND MAINTENANCE (V-018)

The Electrical Installation and Maintenance curriculum is designed to provide a training program in the basic knowledge, fundamentals and practices involved in the electrical trades. A large segment of the program is laboratory and shop instruction designed to give the student practical knowledge and application experience in the fundamentals taught in class.

The graduate of this curriculum is qualified to enter an electrical trade as an on-the-job trainee or apprentice, assisting in the layout, installation, check out and maintenance systems in residential, commercial or industrial settings.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter					
ELC	1111	Basic Electrical Circuits, Machines, and Transformers I	2	6	4
ELC	1311	Basic Electrical Circuits, Machines and Transformers II	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
DFT	110	Introduction to Drafting	4	0	4
DFT	1113	Blueprint Reading: Electrical	4	0	4
			<hr/>	<hr/>	<hr/>
			16	12	20
Winter Quarter					
ELC	1113	AC/DC Machines and Controls I	2	6	4
ELC	1313	AC/DC Machines and Controls II	2	6	4
PHY	1101	Applied Physics	4	0	4
MAT	1110	Electrical Mathematics	4	0	4
ISC	1101	General Industrial Survey	4	0	4
			<hr/>	<hr/>	<hr/>
			16	12	20
Spring Quarter					
ELC	1124	Residential Wiring I	2	6	4
ELC	1324	Residential Wiring II	2	6	4
ENG	1102	Communication Skills	4	0	4
ELN	1103	Solid State Devices	4	0	4
			<hr/>	<hr/>	<hr/>
			12	12	16
Summer Quarter					
ELC	1125	Commercial and Industrial Wiring I	2	6	4
ELC	1325	Commercial and Industrial Wiring II	2	6	4
PSY	1101	Human Relations	4	0	4
BUS	287	Small Business Management	4	0	4
ELC	1114	National Electrical Code	4	0	4
			<hr/>	<hr/>	<hr/>
			12	12	16

Total hours required for graduation = 72

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
ELC 1111		Basic Electrical Circuits, Machines and Transformers	2	6	4
MAT 1101		Vocational Basic Arithmetic	4	0	4
DFT 110		Introduction to Drafting	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>
Winter Quarter					
ELC 1311		Basic Electrical Circuits, Machines and Transformers II	2	6	4
ISC 1101		General Industrial Survey	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Spring Quarter					
ELC 1113		AC/DC Machines and Controls I	2	6	4
DFT 113		Blueprint Reading: Electrical	4	0	4
MAT 1110		Electrical Mathematics	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>
Summer Quarter					
ELC 1313		AC/DC Machines and Controls II	2	6	4
PHY 1101		Applied Physics	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Fall Quarter					
ELC 1124		Residential Wiring I	2	6	4
ENG 1102		Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Winter Quarter					
ELC 1324		Residential Wiring II	2	6	4
ELN 1103		Solid State Devices	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Spring Quarter					
ELC 1125		Commercial and Industrial Wiring I	2	6	4
PSY 1101		Human Relations	4	0	4
BUS 287		Small Business Management	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>
Summer Quarter					
ELC 1325		Commercial and Industrial Wiring II	2	6	4
ELC 1114		National Electrical Code	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Total hours required for graduation = 72

ELECTRONIC SERVICING (V-042)

The curriculum in Electronic Servicing is designed to provide basic knowledge and skills required in the installation, maintenance and servicing of electronic components and systems. Laboratory time will be spent verifying electronic theory and principles, learning installation, maintenance and service techniques.

An electronic service technician will be able to install, maintain, and service electronic equipment including: radios, televisions, audio/video recording and playback equipment, home entertainment systems, digital electronic systems, master antenna television and cable television components and systems.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

				Hours		
				Class	Shop	Credit
Fall Quarter		Title				
ELC 1112		Direct and Alternating Current I		2	6	4
ELC 1312		Direct and Alternating Current II		3	9	6
MAT 1101		Vocational Basic Arithmetic		4	0	4
DFT 110		Introduction to Drafting		4	0	4
				13	15	18
Winter Quarter						
ELN 1123		Amplifier Systems		2	6	4
ELN 1125		Radio Receiver Servicing		3	9	6
ELN 1103		Solid State Devices		4	0	4
MAT 1110		Electrical Math		4	0	4
				13	15	18
Spring Quarter						
ELN 1126		Transistor Theory and Circuits		2	6	4
ELN 1127		TV Receiver Circuits and Servicing		3	9	6
ENG 1102		Communication Skills		4	0	4
ELN 1101		Troubleshooting Concepts		4	0	4
				13	15	18
Summer Quarter						
ELN 1128		TV Receiver Servicing—Color		3	9	6
ELN 1130		Two-Way Mobile Maintenance		2	6	4
PSY 1101		Human Relations		4	0	4
				9	15	14

Total hours required for graduation = 68

NIGHT SEQUENCE

		Title	Hours		
			Class	Shop	Credit
Fall Quarter					
ELC	1112	Direct and Alternating Current I	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
			6	6	8
Winter Quarter					
ELC	1312	Direct and Alternating Current II	3	9	6
DFT	110	Introduction to Drafting	4	0	4
			7	9	10
Spring Quarter					
ELN	1101	Troubleshooting Concepts	4	0	4
ELN	1123	Amplifier Systems	2	6	4
			6	6	8
Summer Quarter					
ELN	1125	Radio Receiver Servicing	3	9	6
MAT	1110	Electrical Math	4	0	4
			7	9	10
Fall Quarter					
ELN	1126	Transistor Theory and Circuits I	2	6	4
ENG	1102	Communication Skills	4	0	4
			6	6	8
Winter Quarter					
ELN	1127	TV Receiver Circuits and Servicing	3	9	6
ELN	1103	Solid State Devices	4	0	4
			7	9	10
Spring Quarter					
ELN	1128	TV Receiver Servicing—Color	3	9	6
PSY	1101	Human Relations	4	0	4
			7	9	10
Summer Quarter					
ELN	1130	Two-Way Mobile Maintenance	2	6	4
			2	6	4

Total hours required for graduation = 68

FOOD SERVICE SPECIALIST (V-053)

The Food Service Specialist curriculum trains students in the art and science of quantity food preparation with particular emphasis on institutional food service. Using a career ladder concept, it is an open-ended curriculum allowing the students more flexibility in their training. In addition to development of knowledge and skills in the art and science of food preparation, the student must develop an understanding and appreciation of food and equipment purchasing, financial control, recordkeeping, basic nutrition and menu planning, and supervision.

A graduate of this curriculum should be qualified for entry into positions as assistant cook, short-order cook, cook, chef's assistant, cook manager, baker, assistant baker, and pastry cook. Employment needs for graduates of this program are found in hospitals, nursing homes, child care centers, college and university foodservice, school foodservice, industrial cafeterias, private clubs, airline foodservice, food processing manufacturers, foodservice contract companies, and commercial restaurants.

COURSE AND HOUR REQUIREMENTS

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
FSO 1102		Food Preparation and Baking I	2	6	4
MAT 1101		Vocational Basic Arithmetic	4	0	4
FSO 1103		Sanitation Safety and Equipment	4	0	4
FSO 1302		Food Preparation and Baking II	2	6	4
			<hr/>	<hr/>	<hr/>
			12	12	16
Winter Quarter					
FSO 1112		Food Preparation and Baking III	2	6	4
FSO 1105		Purchasing	2	0	2
FSO 1109		Production Management	2	0	2
MAT 1102		Food Service Math	4	0	4
FSO 1312		Food Preparation and Baking IV	2	6	4
			<hr/>	<hr/>	<hr/>
			12	12	16
Spring Quarter					
FSO 1122		Food Preparation V	2	6	4
FSO 1106		Menu Planning	3	0	3
ENG 1102		Communication Skills	4	0	4
NUT 101		Nutrition and Diet Theory	3	0	3
FSO 1322		Food Preparation VI	2	6	4
			<hr/>	<hr/>	<hr/>
			14	12	18
Summer Quarter					
FSO 1116		Baking V	2	6	4
FSO 1108		Personnel Management	2	0	2
ENG 1101		Reading Improvement	4	0	4
PSY 1101		Human Relations	4	0	4
FSO 1316		Baking VI	2	6	4
			<hr/>	<hr/>	<hr/>
			14	12	18

Total hours required for graduation = 68

INDUSTRIAL MAINTENANCE

(V-028)

The curriculum in Industrial Maintenance prepares students to repair and maintain machinery, electrical wiring and fixtures, and hydraulic and pneumatic devices found in industrial establishments.

Industrial maintenance persons may be required to install, maintain and service mechanical equipment; follow blueprints and sketches; and use hand tools, metalworking machines, measuring instruments and testing instruments. They operate metalworking machines such as lathe, milling machines and drill press to make repairs. They use the micrometer and calipers to verify dimensions. They assemble wires, insulation, and electrical components using hand tools and soldering equipment. They test electrical circuits and components to locate shorts, faulty connections and defective parts. They inspect, test and repair hydraulic equipment.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

			Hours		
		Title	Class	Shop	Credit
Fall Quarter	MEC 1101	Machine Shop Theory and Practices I	2	6	4
	MEC 1301	Machine Shop Theory and Practices II	2	6	4
	MAT 1101	Vocational Basic Arithmetic	4	0	4
	DFT 110	Introduction to Drafting	4	0	4
			12	12	16
Winter Quarter	ELC 1113	AC/DC Machines and Controls I	2	6	4
	ELC 1313	AC/DC Machines and Controls II	2	6	4
	PHY 1101	Applied Physics	4	0	4
	DFT 1104	Blueprint Reading: Mechanical	3	0	3
	ENV 1105	Hydraulic Fundamentals	4	0	4
			15	12	19
Spring Quarter	AHR 1121	Principles of Refrigeration	2	6	4
	AHR 1115	Fundamentals of Heating	2	6	4
	ENG 1102	Communication Skills	4	0	4
	ISC 1101	General Industrial Survey	4	0	4
	COE 101	Work Experience (or elective)	3	0	3
			15	12	19
Summer Quarter	WLD 1122	Commercial and Industrial Practices I	2	6	4
	WLD 1322	Commercial and Industrial Practices II	2	6	4
	PSY 1101	Human Relations	4	0	4
	MEC 1133	Mechanical Maintenance	3	3	4
			12	18	18

Total hours required for graduation = 72

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
MEC 1101		Machine Shop Theory and Practices I	2	6	4
MAT 1101		Vocational Basic Arithmetic	4	0	4
			6	6	8
Winter Quarter					
MEC 1301		Machine Shop Theory and Practices II	2	6	4
DFT 110		Introduction to Drafting	4	0	4
			6	6	8
Spring Quarter					
ELC 1113		AC/DC Machines and Controls I	2	6	4
PHY 1101		Applied Physics	4	0	4
ENV 1105		Hydraulic Fundamentals	4	0	4
			10	6	12
Summer Quarter					
ELC 1313		AC/DC Machines and Controls II	2	6	4
DFT 1104		Blueprint Reading: Mechanical	3	0	3
			5	6	7
Fall Quarter					
AHR 1121		Principles of Refrigeration	2	6	4
ISC 1101		General Industrial Survey	4	0	4
COE 101		Work Experience (or elective)	3	0	3
			9	6	11
Winter Quarter					
AHR 1115		Fundamentals of Heating	2	6	4
ENG 1102		Communication Skills	4	0	4
			6	6	8
Spring Quarter					
WLD 1122		Commercial and Industrial Practices I	2	6	4
PSY 1101		Human Relations	4	0	4
			6	6	8
Summer Quarter					
WLD 1122		Commercial and Industrial Practices II	3	9	6
MEC 1133		Mechanical Maintenance	3	3	4
			6	12	10

Total hours required for graduation = 72

Electives can be chosen from other curriculum course offerings in the catalog (subject to Department Head's approval).

MACHINIST (V-032)

The Machinist curriculum gives individuals the opportunity to acquire basic skills and related technical information necessary to gain employment as a machinist. The machinist is a skilled metalworker who shapes metal by using machine tools and hand tools. Machinists must be able to set up and operate the machine tools in a modern shop. The machinist is able to select the proper tools and materials required for each job and to plan the cutting and finishing operations in their proper order so that the work can be finished according to blueprint or written specifications. The machinist makes computations relating to dimensions of work, tooling, feeds and speeds of machining. Precision measuring instruments are used to measure the accuracy of work. The machinist also must know the characteristics of metals so that annealing and hardening of tools and metal parts can be accomplished in the process of turning a block of metal into an intricate precise part.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

		Title	Hours		
Fall Quarter			Class	Shop	Credit
MEC	1101	Machine Shop Theory and Practices I	2	6	4
MEC	1301	Machine Shop Theory and Practices II	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
WLD	1330	Machine Shop Welding	1	3	2
DFT	1305	Blueprint Reading: Machinist	4	0	4
			<u>13</u>	<u>15</u>	<u>18</u>
Winter Quarter					
MEC	1102		Machine Shop Theory and Practices III	2	6
MEC	1302		Machine Shop Theory and Practices IV	2	6
MAT	1103		Applied Math: Geometry	4	0
PHY	1101		Applied Physics	4	0
MEC	1105		Introduction to CNC Lathe	1	3
			<u>13</u>	<u>15</u>	<u>18</u>
Spring Quarter					
MEC	1103		Machine Shop Theory and Practices V	2	6
MEC	1303		Machine Shop Theory and Practices VI	2	6
MAT	1104		Applied Math: Trigonometry	4	0
ENG	1102		Communication Skills	4	0
MEC	1106		Programming for CNC Lathe	1	3
			<u>13</u>	<u>15</u>	<u>18</u>

Summer Quarter

MEC	1104	Machine Shop Theory and Practices VII	2	6	4
MEC	1304	Machine Shop Theory and Practices VIII	2	6	4
PSY	1101	Human Relations	4	0	4
BUS	287	Small Business Management	4	0	4
MEC	1107	Programming CNC Milling	1	3	2
			13	15	18

Total hours required for graduation = 72

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
MEC	1101	Machine Shop Theory and Practices I	2	6	4
MAT	1101	Vocational Basic Arithmetic	4	0	4
DFT	1305	Blueprint Reading: Machinist	4	0	4
			10	6	12
Winter Quarter					
MEC	1301	Machine Shop Theory and Practices II	2	6	4
PSY	1101	Human Relations	4	0	4
			6	6	8
Spring Quarter					
MEC	1102	Machine Shop Theory and Practices III	2	6	4
MAT	1103	Applied Math: Geometry	4	0	4
WLD	1330	Machine Shop Welding	1	3	2
			7	9	10
Summer Quarter					
MEC	1304	Machine Shop Theory and Practices IV	2	6	4
PHY	1101	Applied Physics	4	0	4
			6	6	8
Fall Quarter					
MEC	1103	Machine Shop Theory and Practices VI	2	6	4
MAT	1104	Applied Math: Trigonometry	4	0	4
MEC	1105	Introduction to CNC Lathe	1	3	2
			7	9	10
Winter Quarter					
MEC	1303	Machine Shop Theory and Practices II	2	6	4
ENG	1102	Communication Skills	4	0	4
MEC	1106	Programming the CNC Lathe	1	3	2
			7	9	10

Spring Quarter

MEC 1104	Machine Shop Theory and Practices VII	2	6	4
MEC 1107	Programming CNC Milling	1	3	2
		3	9	6

Summer Quarter

MEC 1304	Machine Shop Theory and Practices VIII	2	6	4
BUS 287	Small Business Management	4	0	4
		6	6	8

Total hours required for graduation = 72



PLUMBING AND PIPEFITTING

(V-037)

The Plumbing and Pipefitting curriculum is designed to train individuals to repair or install plumbing systems in residences and small commercial buildings. Courses in plumbing practices and pipefitting are included to provide practical experience as well as courses in theory that one must know to advance and keep up to date. Other courses in communication skills, physics, human relations and business operations are provided to assist the individual in occupational growth.

Plumbers are employed by contractors in the building construction fields to install pipe systems which carry water, steam, air or other liquids or gases for sanitation, heating, industrial production and various other uses. They also alter and repair existing pipe systems and install plumbing fixtures, appliances, and heating and refrigeration units.

COURSE AND HOUR REQUIREMENTS

			Hours		
		Title	Class	Shop	Credit
Fall Quarter	PLU 1110	Plumbing Pipework	4	12	8
	DFT 1115	Blueprint Reading: Plumbing	4	0	4
	MAT 1101	Vocational Basic Arithmetic	4	0	4
	ENG 1102	Communication Skills	4	0	4
			<hr/>	<hr/>	<hr/>
			16	12	20
Winter Quarter	PLU 1112	Installation of Plumbing Fixtures	2	6	4
	PLU 1125	Industrial Piping	3	9	6
	PHY 1101	Applied Physics	4	0	4
	PSY 1101	Human Relations	4	0	4
			<hr/>	<hr/>	<hr/>
			13	15	18
Spring Quarter	PLU 1111	Domestic Water Systems	4	9	7
	WLD 1101	Basic Gas Welding	1	3	2
	PLU 1120	Low Pressure Steam Systems	2	6	4
			<hr/>	<hr/>	<hr/>
			7	18	13
Summer Quarter	PLU 1123	Hot Water and Panel Heating	3	6	5
	BUS 287	Small Business Management	4	0	4
	PLU 1126	Hydraulic Systems Plumbing	3	3	4
	PLU 1128	Plumbing Code	4	0	4
			<hr/>	<hr/>	<hr/>
			14	9	17

Total hours required for graduation = 68

WELDING (V-050)

The Welding curriculum gives students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding field and metals industry. Welders join metals by applying intense heat, and sometimes pressure, to form a permanent bond between intersecting metals.

Welding offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, heavy equipment, railroads, construction pipefitting, production shops, job shops and many others.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

				Hours		
				Class	Shop	Credit
Fall Quarter		Title				
WLD 1120		Oxyacetylene Welding I		2	6	4
WLD 1320		Oxyacetylene Welding II		3	9	6
MAT 1101		Vocational Basic Arithmetic		4	0	4
DFT 110		Introduction to Drafting		4	0	4
				<hr/> 13	<hr/> 15	<hr/> 18

Winter Quarter						
WLD 1121		Arc Welding I		2	6	4
WLD 1321		Arc Welding II		3	9	6
PHY 1101		Applied Physics		4	0	4
DFT 1104		Blueprint Reading: Mechanical		3	0	3
				<hr/> 12	<hr/> 15	<hr/> 17

Spring Quarter						
WLD 1124		Pipe Welding I		2	6	4
WLD 1324		Pipe Welding II		3	9	6
ENG 1102		Communication Skills		4	0	4
ISC 1101		General Industrial Survey		4	0	4
				<hr/> 13	<hr/> 15	<hr/> 18

Summer Quarter						
WLD 1122		Commercial and Industrial Practices I		2	6	4
WLD 1322		Commercial and Industrial Practices II		3	9	6
PSY 1101		Human Relations		4	0	4
BUS 287		Small Business Management		4	0	4
				<hr/> 13	<hr/> 15	<hr/> 18

Total hours required for graduation = 71

NIGHT SEQUENCE

			Hours		
			Class	Shop	Credit
Fall Quarter		Title			
WLD 1120		Oxyacetylene Welding I	2	6	4
MAT 1101		Vocational Basic Arithmetic	4	0	4
			6	6	8
Winter Quarter					
WLD 1320		Oxyacetylene Welding II	3	9	6
DFT 110		Introduction to Drafting	4	0	4
			7	9	10
Spring Quarter					
WLD 1121		Arc Welding I	2	6	4
PHY 1101		Applied Physics	4	0	4
			6	6	8
Summer Quarter					
WLD 1321		Arc Welding II	3	9	6
DFT 1104		Blueprint Reading: Mechanical	3	0	3
			6	9	9
Fall Quarter					
WLD 1124		Pipe Welding I	2	6	4
ISC 1101		General Industrial Survey	4	0	4
			6	6	8
Winter Quarter					
WLD 1324		Pipe Welding II	3	9	6
ENG 1102		Communication Skills	4	0	4
			7	9	10
Spring Quarter					
WLD 1122		Commercial and Industrial Practices	2	6	4
PSY 1101		Human Relations	4	0	4
			7	9	10
Summer Quarter					
WLD 1322		Commercial and Industrial Practices II	3	9	6
BUS 287		Small Business Management	4	0	4
			7	9	10

Total hours required for graduation = 71

NURSING DEPARTMENT

VOCATIONAL DIPLOMA

PRACTICAL NURSE EDUCATION

(V-038)

(DAY SCHEDULE ONLY)

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand a tremendously increased number of well-trained, capable personnel for health service positions. Cleveland Technical College is affiliated with Cleveland Memorial Hospital to provide clinical resources for the practical nursing program.

Classes will be held at the College while actual experience will be obtained at the hospital. The graduate is eligible to take and must pass the Licensure Examination for Practical Nurses administered by the North Carolina Board of Nursing to become a Licensed Practical Nurse.

The LPN is qualified and prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices and, in some localities, public health facilities. In all situations, the LPN functions under the supervision of a registered nurse and/or licensed physicians.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understanding of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences among people and for the worth of every individual, a desire to serve and help others and readiness to conform to the requirements of nursing ethics and hospital policies.

COURSE AND HOUR REQUIREMENTS

First Quarter		Title	Hours Per Week			
			Class	Lab	Clinic	Credit
NUR	1101	Fundamentals of Nursing	8	6	0	11
SCI	1101	Body Structure and Function	5	0	0	5
NUT	101	Nutrition and Diet Therapy	3	0	0	3
PSY	101	Introduction to Psychology	4	0	0	4
ENG	101	Grammar and Composition I	4	0	0	4
			<hr/>	<hr/>	<hr/>	<hr/>
			24	6	0	27

Second Quarter

NUR 1115	Medical-Surgical Nursing I	3	2	0	4
NUR 1108	Obstetrical Nursing	5	0	0	5
NUR 1104	Basic Pharmacology	3	0	0	3
NUR 1112	Clinical I	0	0	15	5
		<u>11</u>	<u>2</u>	<u>15</u>	<u>17</u>

Third Quarter

NUR 1109	Pediatric Nursing	6	0	0	6
NUR 1106	Medical-Surgical Nursing II	6	0	0	6
NUR 1113	Clinical II	0	0	18	6
		<u>12</u>	<u>0</u>	<u>18</u>	<u>18</u>

Fourth Quarter

NUR 1107	Medical-Surgical Nursing III	9	0	0	9
NUR 1110	Vocational Adjustments	1	0	0	1
NUR 1111	Pharmacology II	2	0	0	2
NUR 1114	Clinical III	0	0	18	6
		<u>12</u>	<u>0</u>	<u>18</u>	<u>18</u>

Total hours required for graduation = 80



VOCATIONAL COURSE DESCRIPTIONS

AHR 1101—Auto Air Conditioning	2 6 4
General introduction to the principles of refrigeration, study of the assembly of the components and connections necessary in the mechanisms, the methods of operation and control; proper handling of refrigerants in charging the system.	
AHR 1115—Fundamentals of Heating	2 6 4
An introduction to the fundamentals of heating and heat transfer related to various types of heating systems. The use and care of tools, using instruments to measure combustion efficiencies and installing equipment and ductwork to make up a heating system are covered. Also, introduced are comfort surveys, heat loss and gain, equipment selection and maintenance, solar heating and heat distribution systems.	
AHR 1121—Principles of Refrigeration	2 6 4
An introduction to the principles of refrigeration, terminology, the use and care of tools and equipment and the identification and function of the components of a system. Other topics to be included will be the basic laws of refrigeration; characteristics and comparison of the various refrigerants; the use and construction of valves, fittings and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants.	
AHR 1122—Domestic and Commercial Refrigeration	3 9 6
Domestic refrigeration servicing of conventional, hermetic and absorption systems. Cabinet care, controls and system maintenance in domestic refrigerators, freezers and window air conditioning units are stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units and mobile refrigeration systems is studied. Using manufacturer's catalogs in sizing and matching system components and a study of control, refrigerants, servicing methods is made. The American Standard Safety Code for Refrigeration is studied and its principles practiced. Prerequisite: AHR 1121.	
AHR 1123—Principles of Air Conditioning I	2 6 4
Work includes the selection of various heating, cooling, and ventilating systems, investigation and control of factors affecting air cleaning, movement, temperature and humidity. Use is made of psychrometric charts in determining needs to produce optimum temperature and humidity control. Commercial air conditioning equipment is assembled and tested. Practical sizing and balancing of ductwork is performed as needed. Prerequisite: AHR 1122.	
AHR 1124—Air Conditioning and Refrigeration Servicing	2 6 4
Emphasis is placed on the installation, maintenance and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air conditioned space. Installation of various ducts and lines needed to connect various components is made. Shop work involves burner operation, controls, testing and adjusting of air conditioning and refrigeration equipment failure. Prerequisite: AHR 1323.	

AHR 1126—All Year Comfort Systems	2	6	4
Equipment used to provide heating and cooling for “all year” comfort will be studied. Included will be heat pumps, oil fired, gas fired, water circulating, electric-resistance and an introduction to solar heating and cooling systems. Specialized controls required for all year comfort systems, preventive maintenance, and balancing are included in the course.			
AHR 1128—Automatic Controls	2	6	4
Types of automatic controls and their function in air conditioning systems. Included in the course will be electric and pneumatic controls for domestic and commercial cooling and heating; zone controls, unit heater and ventilator controls, commercial fan systems controls, commercial refrigeration controls and radiant panel controls. Prerequisite: AHR 112.			
AHR 1130—Year Around Duct System Design	4	0	4
This course will enable the Air Conditioning, Heating and Refrigeration student to design the necessary ductwork for residential and light commercial structures. Students will be able to also evaluate existing duct systems for adequate performance. This course is based on ACCA Manual D, D1 and D2 worksheets thereby assuring a duct system design that will meet all code jurisdictions.			
AHR 1131—State Air Conditioning-Heating-Refrigeration Licensing Law	4	0	4
An in-depth study of the North Carolina Code for Heating, Air Conditioning and Refrigeration as set forth by General Statute 143-138 (b). The purpose of the code, and the effect its provisions will impose upon the pertinent industry, will be covered by this course.			
AUT 1111—Auto Body Repair I	2	6	4
Basic principles of automobile construction, design and manufacturing. A thorough study of angles, crown and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning and painting of damaged areas.			
AUT 1112—Auto Body Repair III	2	6	4
A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns and contours of the metal of the body and fenders. Metal working and painting.			
AUT 1113—Metal Finishing and Painting I	2	6	4
Development of the skill to shrink stretched metal, soldering and leading and preparation of the metal for painting. Straightening of doors, hoods and deck lids; fitting and aligning. Painting fenders and panels, spot repairs and complete vehicle painting; the use and application of power tools.			
AUT 1114—Body Shop Applications I	2	6	4
General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training: repair order writing, parts purchasing, estimates of damage and developing the final settlement with the adjustor.			

AUT 1123—Brakes	2	6	4
A complete study of various braking systems employed on automobiles and light trucks.			
AUT 1311—Auto Body Repair II	3	9	6
A continuation of AUT 1111.			
AUT 1312—Auto Body Repair IV	3	9	6
A continuation of AUT 1112.			
AUT 1313—Metal, Finishing and Painting II	3	9	6
A continuation of AUT 1113.			
AUT 1314—Body Shop Applications II	3	9	6
A continuation of AUT 1114.			
BUS 287—Small Business Management	4	0	4
“How to” introduction to the practices and problems involved in small business operations. For business people who will one day find themselves financially able to start or buy a business; it provides an overview of the major problems they will face and the pitfalls they must avoid if success is to be assured.			
CAR 1001—Blueprint Layout and Design	4	0	4
Building Trades-Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.			
CAR 1101—Carpentry I	2	6	4
Carpentry I is a course designed to provide the student with the necessary skills to use power and hand tools safely and according to their recommended use. The student will also be able to correctly identify all power and hand tools relating to the field of carpentry. Lecture and shop will provide experience and knowledge in this course.			
CAR 1102—Carpentry III	2	6	4
Carpentry III is a course designed to enable a student to have competency in building floor systems of various types. The student will be able to correctly estimate and determine floor joist size. The student will learn the limitations of construction grade lumber and how to correctly size lumber for girders, headers and floor joists. Lecture and shop will provide experience and knowledge in this course.			
CAR 1103—Carpentry V	2	6	4
Carpentry V is a course designed to enable a student to have competency in building and framing roof structures. The various types of roofs will be covered, and the student will be able to identify each and have a general idea of how each is constructed. How to cut and figure rafters will be covered. Also, truss application will be covered.			
CAR 1104—Carpentry VII	2	6	4
Carpentry VII is a course designed to give a student competency in finished carpentry in the interior of a structure. This course will cover interior wall finish and how to run moldings of various types. It will also include how to install various types of hardware (hinges, locks, hasps, rollers) and how to install cabinets and mechanical devices. Stairs and stairway construction will be a major part covered in this course.			

CAR 1106—Construction Seminar

4 0 4

Designed to survey current and new techniques in the construction field. This will be done through class research, demonstration, and lecture. Students will participate in all facets of the instructional process. Subject areas will be: innovations in the construction field, site layout, traditional techniques, materials and methods comparison, and approved areas for research such as solar, energy and geothermal applications.

CAR 1301—Carpentry II

2 6 4

Carpentry II is a course designed to enable a student to properly lay-off and stake-out a house. Practice in site work (using a transit and builder's level) will be an important topic of study. Carpentry II is a course designed to provide the student with the skills necessary to lay block and brick, to align and also to construct simple corners and foundation walls. Lecture and laboratory will be coordinated to provide development in this skilled area.

CAR 1302—Carpentry IV

2 6 4

Carpentry IV is a course designed to enable a student to have competency in constructing walls. Corner construction and partition intersection framing will enable the student to assemble all exterior and partitioned walls. The course will cover how to properly locate and frame all window and door openings. Bracing of walls and preparing walls for rafters will also be covered.

CAR 1303—Carpentry VI

2 6 4

Carpentry VI is a course designed to enable a student to have competency in the exterior finish of a structure. Major things covered in this course will be: how to frame and finish overhang gutter work, door and window frames, wall coverings and trim.

CAR 1304—Carpentry VIII

2 6 4

Carpentry VIII is a course designed to give the student general knowledge and experience in cabinet work.

CAR 1305—Building Code

4 0 4

This Building Code course is designed to give a student specific knowledge in residential building construction. *The North Carolina Uniform Residential Building Code* will be studied. Lecture will give the student knowledge and experience on how to use this book.

CAR 1306—Introduction to Woodworking

4 0 4

A beginning course in hand woodworking tools and use. This course covers major hand working tools, their care, maintenance and use; types of wood and their use as related to industrial, commercial and residential use.

DFT 110—Introduction to Drafting

4 0 4

In this course, the student will learn to organize for presentation on prints mechanical architectural and geographic information. This information will be presented through use of orthographics, isometrics, sectional drawings, detail drawings, dimensioning, notes and lettering. The course emphasis will be on the general presentation of this information as applied to different areas of drafting and drawing. The student will develop these skills through actual practice with the most common drawing tools.

DFT 1104—Blueprint Reading: Mechanical

3 0 3

Mechanical-Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures, and notes.

DFT 1113—Blueprint Reading: Electrical

4 0 4

Electrical-Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course.

DFT 1115—Blueprint Reading: Plumbing

4 0 4

Sketching diagrams and schematics, and interpretation of blueprints applicable to the plumbing trades. Emphasis will be on plumbing plans for domestic and commercial buildings. Piping symbols, schematics, diagrams and notes will be studied in detail. Applicable building and plumbing codes will be used for reference.

DFT 1116—Blueprint Reading: Air Conditioning

4 0 4

A specialized course in drafting for the heating, air conditioning and refrigeration student. Emphasis will be placed on reading of blueprints that are common to the trade; blueprints of mechanical components, assembly drawings, wiring diagrams, and schematics, floor plans, heating system plans including duct and equipment layout plans and shop, sketches. The student will make tracings of floor plans and layout air conditioning.

DFT 1305—Blueprint Reading for Machinists

4 0 4

Advanced blueprint reading as related to actual complete detailed drawings found in machine shops. Discussion as to how pieces will be produced and this relationship to the drawing.

DSL 1101—Diesel Engines I

2 6 4

This course will introduce the student to the diesel engine. The theory and principle of engine operation will be covered with emphasis on application through disassembly and rebuild.

DSL 1102—Diesel Engines II

3 9 6

A continuation of DSL 1101.

DSL 1103—Diesel Electrical, Fuel and Air Conditioning**Systems I**

2 6 4

This course is designed to study the electrical system as it relates to the engine, air conditioning and auxiliary systems of the tractor. Principles of air conditioning, fuel systems and electrical systems and electrical systems will be covered.

DSL 1104—Diesel Electrical, Fuel and Air Conditioning**Systems II**

3 9 6

A continuation of DSL 1103.

DSL 1105—Diesel Truck Chassis, Suspension**and Brakes I**

2 6 4

This course will build competency in braking, hydraulic and air systems on the tractor. It also covers the chassis suspension and common job tasks related to these areas.

DSL 1106—Diesel Truck Chassis, Suspension**and Brakes II**

3 9 6

A continuation of DSL 1105.

DSL 1107—Power Trains I	2	6	4
This course is designed to build competency in heavy truck transmission and differentials in the areas of troubleshooting, servicing, repair and rebuild.			
DSL 1108—Power Trains II	3	9	6
A continuation of DSL 1107.			
ELC 1102—Basic Electricity for Air Conditioning, Heating, and Refrigeration	4	0	4
The use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations. Electrical principles and procedures for trouble-shooting of the various electrical devices used in air conditioning, heating and refrigeration equipment. Included will be transformers, various types of motors and starting devices, switches, electrical heating devices and wiring.			
ELC 1111—Basic Electrical Circuits, Machines, and Transformers I	2	6	4
A student will gain competency in construction and using series and parallel circuits. Single and polyphase rotating machinery, transformers and transformer connections will be also be studied. A large portion of lab time will be used to build competency in understanding and practical application of these circuits and machines.			
ELC 1112—Direct and Alternating Current I	2	6	4
A study of the structure of matter and the electron theory, the relationship between voltage, current and resistance in series, parallel and series-parallel circuits. Analysis of direct current potentials. Fundamental concepts of alternating current flow; a study of reactance, impedance, phase angle, power and resonance and alternating circuit analysis.			
ELC 1113—Alternating Current and Direct Current Machines and Control I	2	6	4
This course is designed to build competency in the area of magnetic motor controls. Basic start-stop-jog circuits and their many variations as well as limiting devices in these circuits will be studied in detail. Large portions of lab time will be spent in developing competency in the use of the circuits as they apply to industry.			
ELC 1114—National Electrical Code	4	0	4
A study of the National Electrical Code in preparation for the licensing examination. Instruction will include the latest code revisions, safety measures and standard practices in the wiring of single and multifamily dwellings, commercial establishments and industrial locations.			
ELC 1124—Residential Wiring I	2	6	4
Provides instruction and application in the fundamentals of blueprint reading, planning, layout and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Codes regulators in actual building mock-ups.			

ELC 1125—Commercial and Industrial Wiring I	2	6	4
Layout, planning and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring conduit preparation and installation of simple systems.			
ELC 1311—Basic Electrical Circuits, Machines and Transformers II	2	6	4
A continuation of ELC 1111.			
ELC 1312—Direct and Alternating Current II	3	9	6
A continuation of ELC 1112.			
ELC 1313—AC/DC Machines and Controls II	2	6	4
A continuation of ELC 1113.			
ELC 1324—Residential Wiring II	2	6	4
A continuation of ELC 1124.			
ELC 1325—Commercial and Industrial Wiring II	2	6	4
A continuation of ELC 1125.			
ELN 1101—Troubleshooting Concepts	4	0	4
A study of the techniques used in analysis of defective systems by block diagram. Introduction to test equipment used in troubleshooting.			
ELN 1103—Solid State Devices	4	0	4
Most equipment being installed in industry is now controlled by electronic devices made up of transistors and other solid-state components. The student is taught solid state diodes, transistors of several types, silicon controlled rectifiers, triacs, diacs and other specific components with the emphasis on what the device does and how to test it. Basic operation and limitations of solid-state components is emphasized, along with techniques in handling and installing these devices and the voltages and currents encountered. The interpretation of component specifications is also encountered. Some basic circuitry is developed showing the application of each device and its use in industrial control. Lab hours are spent testing and measuring values encountered in solid state circuits and becoming familiar with identification and measurement techniques.			
ELN 1123—Amplifier Systems	2	6	4
An introduction to commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifier systems and auxiliary equipment. The operation and servicing of inter-communication amplifiers and switching circuits will also be taught. Prerequisites: MAT 1110, ELC 1312.			
ELN 1125—Radio Receiver Servicing	3	9	6
Principles of radio reception and practice of servicing. Included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components and the alignment of AM and FM receivers. Prerequisites: ELN 1123.			
ELN 1126—Transistor Theory and Circuits	2	6	4
Transistor theory, operation, characteristics and their application to audio and radio frequency amplifier and oscillator circuits. Prerequisite: ELN 1123.			

ELN 1127—TV Receiver Circuits and Servicing	3	9	6
Principles of television receivers, alignment of radio and intermediate frequency amplifiers, adjustment of horizontal and vertical sweep circuits will be taught. Techniques of troubleshooting and repair of TV receivers with the proper use of associated test equipment will be stressed. Additional study of more specialized servicing techniques and oscilloscope waveform analysis will be used in adjustment, troubleshooting and repair of the color television circuits. Prerequisites: ELN 1326, ELN 1125.			
ELN 1128—Color TV Receiver Servicing	3	9	6
A continuation of ELN 1327C with additional study of more specialized servicing techniques and oscilloscope waveform analysis in the adjustment, troubleshooting, and repair of the color television circuits. Prerequisite: ELN 1327.			
ELN 1130—Two-Way Mobile Maintenance I	2	6	4
A course to acquaint the student with the theory and maintenance of fixed station and mobile station transmitters and receivers.			
ENG 101—Grammar and Composition I	4	0	4
Offers an historical survey of the English language, a review of English grammar, and an opportunity to improve written self-expression through expository essays and both primary and secondary research.			
ENG 1101—Reading Improvement	4	0	4
Designed to improve overall reading efficiency with special emphasis on purpose, comprehension, word recognition skills, and the study of reading materials related to the student's curriculum.			
ENG 1102—Communication Skills	4	0	4
Explains topics in oral and written communication including the communication process, listening, oral presentations, nonverbal communication, participation in meetings, writing the letter of application and accompanying resume, and special problems of English grammar and usage.			
ENV 1105—Hydraulic Fundamentals	4	0	4
An introduction to basic hydraulic principles including Pascal's Principles of static fluids, Berboulli's theorem of fluids in motion, viscosity, laminar and turbulent flow, Reynolds' number, dynamic similitude, velocity gradient, etc.			
FSO 1102—Food Preparation & Baking I	2	6	4
A study of the scientific principles of baking, food preparation, and cooking procedures; included will be preparation of salads, stocks, sauces, breads, desserts, and beverages.			
FSO 1103—Sanitation-Safety Equipment	4	0	4
A study of sanitation standards and safety precautions as related to food storage, preparation, and service. The student will also learn the designs, methods and care of kitchen equipment.			
FSO 1105—Purchasing	2	0	2
To indicate the functions and administrative operations of the food purchaser's department. Methods and procedures for purchasing foods, standards, grading, and inspecting those items bought. Also, the student will learn how items are to be received, stored, and issued.			

FSO 1106—Menu Planning	3	0	3
This course will demonstrate a study of composing a menu. It will reflect the seasonal changes necessary in menu planning, the essential human food requirements and the types of food that produce these requirements.			
FSO 1108—Personnel Management	2	0	2
A study of the job responsibilities and duties of the food service worker; his relationship to his associates, with emphasis on understanding human behavior, labor policies and legislation, and the importance of self-development in relation to professional responsibility.			
FSO 1109—Production Management	2	0	2
Use of standardized recipes and portion control, work sheets, score sheets for judging food products, plan of work to improve work methods and further emphasis on motion economy.			
FSO 1112—Food Preparation & Baking III	2	6	4
The course will develop artistic skills related to cooking and baking. The course will introduce more detailed assignments in the practical shop work to achieve increased skills. The student will learn the principles and preparation of egg cookery. All breakfast preparation will be taught.			
FSO 1116—Baking V	2	6	4
A continuation of FSO 1312 - Food Preparation & Baking IV.			
FSO 1122—Food Preparation V	2	6	4
A continuation of FSO 1312 - Food Preparation & Baking IV.			
FSO 1302—Food Preparation & Baking II	2	6	4
This course is primarily designed to teach the students the different cuts of meats and their respective cooking methods. Fish, seafood, and poultry will also be stressed. The student will also be required to expand his knowledge in breads, cakes, pies, and other desserts.			
FSO 1312—Food Preparation & Baking IV	2	6	4
A continuation of FSO 1112 - Food Preparation & Baking III.			
FSO 1316—Baking VI	2	6	4
A continuation of FSO 1116 - Baking V.			
FSO 1323—Food Preparation VI	2	6	4
A continuation of FSO 1122 - Food Preparation V.			
ISC 1101—General Industrial Survey	4	0	4
This course will cover a wide variety of industrial processes, from conception to final production. It includes processes in graphics, wood industries, plastic and metal industry.			
MAT 1101—Vocational Basic Arithmetic	4	0	4
A self-paced study of arithmetic skills which may be applied in the vocational areas of study. Topics of study include: whole numbers, decimals, fractions, ratios, proportions, percent and measurement.			
MAT 1102—Food Service Math	4	0	4
This course focuses on the essentials of mathematics required in the food service industry. Topics covered include arithmetic operations with whole numbers, rational numbers, decimals, and percentages. Fundamental principles of business mathematics are used in practical problems of food industry.			

MAT 1103—Applied Math: Geometry

4 0 4

An exploration of the fundamental properties of plane and solid geometric figures encountered in machine shop processes and other trades.
Prerequisite: MAT 1101.

MAT 1104—Applied Math: Trigonometry

4 0 4

Trigonometric ratios; solving problems with right triangles, using tables and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equation. All topics are applied to practical problems.
Prerequisite: MAT 1101.

MAT 1110—Electrical Mathematics

4 0 4

A course in algebraic and trigonometric processes involved in theoretical and applied electronics. Topics of study include: factoring roots, use of calculator, electrical equations, electrical units; fractional equations, polynomials, simultaneous equations of two unknowns and trigonometric functions.
Prerequisite: MAT 1101 or equivalent.

MAT 1112—Construction Estimating

4 0 4

Construction Estimating is a course designed to give a student specific knowledge in estimating the various phases of a residence or small structure. Quantity takeoff will be taught. Estimating will be a major part of the course. Competency will come with many hours of practice.

MEC 1101—Machine Shop Theory and Practices I

2 6 4

An introduction to the machinist trade and the potential it holds for the craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring tools.

MEC 1102—Machine Shop Theory and Practices III

2 6 4

Advanced operations in layout tools and procedures, surface grinding, milling machine, lathe and planer will be taught in this course. The students will also be doing projects showing proper sets and machine operation.

MEC 1103—Machine Shop Theory and Practices V

2 6 4

Advanced work on the engine lathe, turning, boring and threading machine and shaper will be dealt with in this course. The student will be introduced to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worm gears and wheels.

MEC 1104—Machine Shop Theory and Practices VII

2 6 4

Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc.

MEC 1105—Introduction to CNC Lathe

1 3 2

The student will be oriented to the CNC lathe, the tooling safety and basic programming. The student will be instructed in the math and blueprint needed to program and operate the CNC lathe.

MEC 1106—Programming the CNC Lathe

1 3 2

An advanced programming course for the CNC lathe. As a continuation of MEC 1105, this course will give students advanced training in machine set-up and tooling for CNC. Students will write their own programs, choose tooling, set-up and run the lathe with their programs.

MEC 1107—Programming CNC Milling 1 3 2

Students will be oriented to tooling safety, basic programming, and the CNC milling machine. They will choose tooling and individually write, set up, and run their own programs.

MEC 1133—Mechanical Maintenance I 3 3 4

To acquaint the student with the basic fundamentals of installation, maintenance and repair of machines. Miscellaneous electrical, mechanical, hydraulic, pneumatic and lubrication devices are installed and maintained. Methods of rigging and use of precision measuring tools and checking for accuracy, squareness, and correct center line distance is stressed for pre-start inspection. Prerequisites. MEC 1101, MEC 1102, DFT 1104, DFT 1113. Corequisite: ELC 1112.

MEC 1135—Mechanical Installation 4 0 4

Mechanical Installation is a course designed to give a student specific knowledge in the related trades involved with residential building. This course will touch on the electrical, plumbing and heating and air conditioning fields. The basics of the vocational fields will be covered.

MEC 1199—Automotive Machine Shop 2 6 4

This course is designed for the student to gain competency in machine shop processes related to the automotive industry. Such processes include use of the brake drum lathe, valve grinding equipment, precision measure and use of the boring bar.

MEC 1301—Machine Shop Theory and Practices II 2 6 4

Layout procedure and processes of the power cut-off saw, band saw, drill press, milling machine, lathe, and off hand grinding will be introduced both in theory and practice.

MEC 1302—Machine Shop Theory and Practices IV 2 6 4

The students will be introduced to operations involved in cylindrical, cutter and internal cylindrical grinding. Projects will be selected encompassing proper setups and machine operations.

MEC 1303—Machine Shop Theory and Practices VI 2 6 4

The trainee will use precision tools and measuring instruments such as the vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder.

MEC 1304—Machine Shop Theory and Practices VIII 2 6 4

Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing of good work habits and attitudes acceptable to the industry.

NUR 1101—Fundamentals of Nursing 8 6 0 11

A study of principles which are basic to safe effective nursing care with laboratory practice in basic nursing skills. Introduces student to nursing care planning, care of the patient's environment; care of a dependent patient, observing a patient's condition and reporting pertinent information.

NUR 1104—Basic Pharmacology 3 0 0 3

An introduction to drug therapy. A foundation of general knowledge in sources of drugs, legal control of drugs, computing dosage, classification and action of common drugs, and safety factors the nurse must use in administering drugs. Prerequisite: Completed first quarter of PNE.

NUR 1106—Medical-Surgical Nursing II	6	0	0	6
A continuation of Medical-Surgical Nursing I. This course is a study of the nursing needs of patients with conditions related to various body systems-integumentary, respiratory, cardiovascular, gastrointestinal, and adult communicable diseases. Prerequisite: Completed second quarter of practical nursing. Corequisite: NUR 1113.				
NUR 1107—Medical-Surgical Nursing III	9	0	0	9
A continuation of Medical-Surgical Nursing II. A study of the nursing needs of patients with conditions related to various body systems. Also includes study of the needs of the psychiatric patient, emergency nursing care, and nursing care of the seriously ill and dying patient. Prerequisite: NUR 1106. Corequisite: NUR 1114.				
NUR 1108—Obstetrical Nursing	5	0	0	5
An introduction to the needs of the mother during normal pregnancy, labor, delivery, and post partum states. It includes a study of the needs and care of the newborn and an introduction to common complications of obstetrical patients. This background knowledge is essential for planned clinical practice in care of the mother and newborn. Prerequisite: Completed first quarter of PNE. Corequisite: NUR 1112.				
NUR 1109—Pediatric Nursing	6	0	0	6
Provides an opportunity for the practical nurse student to study the well child, nursing principles and skills that are common in the care of sick children and adapting these to the level of the child. Includes study of common illnesses of children—symptoms, diagnostic procedures, treatment, and nursing interventions. This background study is essential to planned clinical practice in nursing care of children. Prerequisite: Completed second quarter of PNE. Corequisite: NUR 1113.				
NUR 1110—Vocational Adjustments	1	0	0	1
This course is designed to help the student make the adjustment from the role of a student to that of a graduate practical nurse. Includes a review of legal and ethical aspects, employment, organizations, and continuing education as it relates to the graduate practical nurse. Prerequisite: Enrolled in fourth quarter of PNE.				
NUR 1111—Pharmacology II	2	0	0	2
A continuation of basic pharmacology with emphasis on the nurse's responsibilities in preparing and giving intradermal, subcutaneous, and intramuscular injections. Includes nursing interventions for patients receiving intravenous administrations. Prerequisite: Enrolled in fourth quarter of PNE. Corequisite: NUR 1114.				
NUR 1112—Clinical I	0	0	15	5
Beginning clinical practice in a general hospital with clinical activities planned in assessing, planning, implementing, and evaluating care for assigned medical, surgical, and obstetrical patients. Involves related clinical assignments in obstetrical nursing at local health department. Prerequisite: Completed first quarter of PNE. Corequisites: NUR 1108, NUR 1115.				
NUR 1113—Clinical II	0	0	18	6
A continuation of Clinical I with planned clinical activities in a general hospital in surgical and pediatric patient care and beginning practice in administration of oral medication under supervision of an instructor. Involves related clinical assignments in pediatric patient care at local health department. Prerequisite: Enrolled in third quarter of PNE. Corequisites: NUR 1109, NUR 1106.				

NUR 1114—Clinical III

0 0 18 6

A continuation of Clinical II with planned clinical experience in a general hospital in medical patients care, patient care in special service areas (ER, CCU), beginning administration of injectable medications under supervision of an instructor, and an increased complexity of patient care assignments. Involves related clinical experience in home health care and extended patient care facilities. Prerequisite: Enrolled in fourth quarter of PNE. Corequisites: NUR 1107, NUR 1111.

NUR 1115—Medical-Surgical Nursing I

3 2 0 4

This course is an introduction to medical-surgical nursing. It is a study of classification, etiology, symptoms, methods of diagnosis, prevention, therapy, and nursing interventions of illnesses. Emphasis is the surgical patient, geriatrics, long-term illnesses, cancer, and allergies. Prerequisite: Completed first quarter of PNE. Corequisite: NUR 1112.

NUT 101—Nutrition and Diet Therapy

3 0 3

The course focuses on the nutritional requirements of growth and the contribution to good health by proper nutrition. The harmful effects of inadequate diet are discussed. Fundamentals of normal nutrition are used to introduce the student to diet changes made necessary by illness. The principles of meal planning and the selection, preparation, and storage of foods are included.

PHY 1101—Applied Physics

4 0 4

An introduction to physical principles and their application in industry. Topics in this course include measurements, properties of solids, liquids, gases and basic electrical principles.

PLU 1110—Plumbing Pipework

4 12 8

This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, where the student can learn how to handle these materials correctly. The student will perform operations such as threading, cutting, caulking, and sweating of the various kinds of pipe and tubing used in the trade.

PLU 1111—Domestic Water Systems

4 9 7

The installation of water distribution systems, beginning with the source of supply and including the location of pipes, valves and pumps in both single-story and multi-story buildings will be studied. Heating devices and drainage systems, including their ventilation, are a part of this course. Field trips will be taken to study various types of installations.

PLU 1112—Installation of Plumbing Fixtures

2 6 4

The difference in materials and styles of laboratories, bathtubs and sinks, and the many ways that these fixtures can be installed will form the basis of this course. The proper use of traps is included. The student will get actual practice by making installations.

PLU 1120—Low Pressure Steam Systems

2 6 4

The student will become acquainted with types of low pressure steam boilers, the principles of boiler operation. Boiler accessories such as connectors, fittings, and insulation are to be included. Low pressure steam systems, their layout, and component parts will be studied and installed. Equipment used in heat transmission, such as radiators, coils and connectors will be included.

PLU 1123—Hot Water and Panel Heating

3 6 5

The piping and accessory equipment needed to transfer hot water to radiators, heaters, and coils, and the advantages and disadvantages of each of these units will be studied, including apparatus for radiant heating and panel heating. Methods of "sizing" equipment for various installations will be included. Practical application will be provided in installing this equipment.

PLU 1125—Industrial Piping

3 9 6

Piping systems of boilers, turbines, and steam engines especially as they are used in steam power plants and process piping such as in the chemical industries will be major emphasis of this course.

PLU 1126—Hydraulic Systems Plumbing

3 3 4

Plumbing application in hydraulic systems. Hydraulic principles, circuits, control valves, actuators, pumps, fluids and various accessories that complete hydraulic systems will be studied. Installation and servicing methods of these systems will be undertaken.

PLU 1128—North Carolina Plumbing Code

4 0 4

A study of the North Carolina plumbing code, in preparation for the licensing examination. Instruction will include the latest code revisions, safety measures and standard practices in the plumbing of single and multi-family dwellings, commercial establishments and industrial locations.

PME 1101—Internal Combustion Engines I

5 3 6

Development of a thorough knowledge and ability in using, maintaining and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operating of components of internal combustion engines. Testing of engine performance, servicing and maintaining of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems, proper lubrication and methods of testing, diagnosing, and repairing.

PME 1102—Engine Electrical Systems

5 3 6

A thorough study of the electrical systems in the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring.

PME 1103—Automotive Analyzing Equipment

5 3 6

Development of a thorough knowledge of and ability to use engine analyzing equipment. The testing of the ignition systems, fuel system, exhaust, and emissions system.

PME 1221—Front Alignment

2 6 4

Theory of operation, correct disassembly and mounting of all front suspension parts of various types of frames (car and light truck). A thorough understanding of the function and repair of steering gears (power and standard), shock absorbers, springs, wheels and tires, pumps, rams and other steering parts and accessories is gained. Theory and application of steering geometry, correct diagnosis of problems and use of the alignment and balancing machines; analysis and correction of tire wearing problems, vibrations, hard steering, pulling and other problems.

PME 1227—Power Accessories

1 3 2

This course will teach the student the principles and operations of the power accessories of the modern automobile. The student will study and repair the power accessory units such as a power steering, power windows, power seats, power antennas, power headlights, power tailgates, windshield wipers, and windshield washers.

PME 1301—Internal Combustion Engines II	2	6	4
A continuation of PME 1101.			
PME 1302—Fuel Systems	5	3	6
A thorough study of the fuel systems in the automobile, fuel pump carburetors and fuel injectors. The characteristics of fuel, type of fuel system, special tools, and testing equipment.			
PSY 1101—Human Relations	4	0	4
A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationship within the work situation.			
SCI 1101—Body Structure and Function	5	0	5
The aim of this course is to describe and explain the fundamental facts and principles of human structure and function. Emphasis will be placed on a thorough exploration of the systems of the body. The dissection of a preserved cat will accompany the lectures.			
WLD 1101—Basic Gas Welding	1	3	2
Welding demonstrations by the instructor and practice by the students in the welding shop. Safe and correct methods of assembly and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver soldering, and flame cutting methods applicable to mechanical repair work.			
WLD 1120—Oxyacetylene Welding I	2	6	4
This course is designed to acquaint the student with the safety rules of welding, identification, set-up and operation of oxyacetylene welding equipment. The student will be able to carry a puddle without filler rods, weld in the vertical, horizontal and overhead positions, weld heavy steel plates, identify, weld and braze cast iron, and operate a cutting torch efficiently. The student will be introduced to welding symbols and metallurgy as it relates to oxyacetylene welding.			
WLD 1121—Arc Welding I	2	6	4
The student will learn the safety rules of welding, understand the operation and use of the arc welding machine, identify and know the importance of personal protective equipment, identify welding tools and types of electrodes, strike an arc and run a bead, and bond two pieces of metal together. The student will be introduced to welding symbols and metallurgy as it applies to arc welding. The student will also become acquainted with blueprints and how they relate to arc welding.			
WLD 1122—Commercial and Industrial Practices I	2	6	4
This course is designed to instruct the student in the proper procedure for repairing broken equipment, to fabricate and build parts from new stock of steel. The student will learn the inert gas welding process, practice and become proficient in flat-plate welding and also become familiar with the welding codes, specifications, and certification of the American Welding Society.			
WLD 1124—Pipe Welding I	2	6	4
This course is designed to give the student knowledge in the operation of pipe welding equipment and accessories, specific welding operations, preparing a welding joint, welding in specified positions, obtaining knowledge of designing and fabrication of pipe and duct ways. The student will be introduced to welding symbols and metallurgy as it applies to pipe welding.			

WLD 1320—Oxyacetylene Welding II	3	9	6
A continuation of WLD 1120.			
WLD 1321—Arc Welding II	3	9	6
A continuation of WLD 1121.			
WLD 1322—Commercial and Industrial Practices II	3	9	6
A continuation of WLD 1122.			
WLD 1324—Pipe Welding II	3	9	6
A continuation of WLD 1124.			
WLD 1330—Machine Shop Welding	1	3	2
Arc welding demonstrations by the instructor and practice by the students. The operation of AC & DC arc welding machines. Studies are made of welding heats, polarities and electrodes. Practice will be given for making groove and fillet type welds. Also deals with the physical and chemical behavior of the metals during shaping, welding, and treating operations.			



NON-CREDIT PROGRAMS



INDUSTRY AND COMMUNITY SERVICE

CONTINUING EDUCATION PROGRAMS

Adult or Continuing Education as defined in this catalog includes activities designed to meet the needs of people beyond compulsory school age whose major occupation is not that of a full time student. It is the purpose of Cleveland Technical College to afford this opportunity to each individual to develop to the fullest potential in vocational, intellectual or cultural areas. It is also the aim of the College to be of service to area industries, businesses and public agencies by providing training and upgrading for employees. In order to meet these aims the Extension and Adult Education Division of the College will help make continuing education available by offering a variety of courses and programs.

The extent of different programs and courses is based upon the interest shown by the community, availability of component instructors and the limitations of available equipment, space and funds. Whenever possible, courses are scheduled as community needs or interests are indicated. Some classes, constantly in demand, are offered on a continuing basis. Others are started at the requests of individuals or organizations. The College welcomes such requests and suggestions for additional courses.

Continuing education classes conducted by Cleveland Technical College have four separate classifications: occupational, academic, practical skills, and avocational. The classes are non-curriculum, vary in length, conducted both day and evening, and are taught by qualified instructors selected by the College. A schedule of some classes being offered is announced by the College prior to each quarter and other classes are announced during the quarter, as they are arranged.

ADMISSION

Any adult 18 years of age or older, who is not enrolled in public school is eligible to enroll.

REGISTRATION

Registration will be held at the first meeting unless specified otherwise. In some instances when enrollment is limited, adults should notify the College by phone, letter, or personal visit to place their names on the pre-registration list for classes.

EXPENSES

Continuing Education classes classified as Occupational and Academic have a \$10.00 registration fee, while those classified as Practical Skills are \$15.00 and Avocational are charged \$19.00. The only exceptions to the tuition charges are in Fire Service and Law Enforcement Training programs including Civil Preparedness courses and programs for Rescue Squad personnel. Also, tuition fees are waived for persons 65 years of age or older in all courses. A charge may be necessary in some courses for class supplies. Books and supplies are available through the College Bookstore for both campus and off-campus classes.

CLASS LOCATIONS

Many of the continuing education classes are held on the campus at Cleveland Technical College. Others are conducted throughout Cleveland County in local public schools, community centers, churches, industries, business or wherever a suitable meeting place can be arranged. Classes are organized in any community whenever a sufficient number of prospective class members indicate an interest.

ATTENDANCE

A minimum enrollment of 15 persons is needed to conduct a class. Adults are expected to attend class regularly. Attendance records are maintained by the instructors. Insufficient enrollment or attendance may result in cancellation of the class.

CERTIFICATES

Certificates are awarded in certain classes to students successfully completing course requirements. Also, a certificate of High School Equivalency (GED) is awarded to adults who successfully complete the high school equivalency tests.

INSTRUCTORS

Qualified instructors, as determined by the Extension and Adult Education Divisions, will be employed for continuing education classes. Leaders from the community in civic, cultural, educational, industrial and business fields as well as persons skilled or knowledgeable in particular areas of interest are available as instructors.

OCCUPATIONAL EXTENSION EDUCATION PROGRAMS

Extension classes are designed to meet the needs of industry, business and other areas of occupational endeavor. Specifically, classes may be organized when there is a need for:

1. Upgrading for those within a specific occupation.
2. Retraining classes for those wishing to change their vocation.
3. Preparation of individuals for initial employment.

All classes are organized where a demand for certain skills is required, based upon the needs of the firm or group as represented. The classes may be arranged on a short or long-range schedule as needed. Flexibility is the key asset in the Occupational Extension Program.

The following is a partial list of the many broad areas of instruction in which training is available:

**Fire Service Training
Hospitality Education
Law Enforcement Training
Industrial Training
Woodworking Occupations
Building Trades
Agricultural Business and Production
Equipment Maintenance and Repair**

NEW INDUSTRY TRAINING

One of the primary functions of Cleveland Technical College is to stimulate the creation of more challenging and rewarding jobs for the people of our area by providing a type of training geared to the needs of new and/or expanding industries. With some limitations, this institution, in cooperation with the Industrial Services Division of the State Department of Community Colleges, will design and administer special programs for training the production manpower required by any new or expanding industry which results in creating new job opportunities for North Carolina.

In addition to helping any new or expanding industry meet its immediate manpower needs the program seeks to encourage each industry to develop a long-range training program of its own to satisfy its continuing replacement and retraining needs.

For further information on the New or Expanding Industry program, please contact the Department of Continuing Education, Cleveland Technical College, or the Director, Industrial Services Division, North Carolina Department of Community Colleges, Raleigh, North Carolina.

GENERAL ADULT EDUCATION

General Adult and Community Service classes and programs are offered through the Extension Division of Cleveland Technical College to enable individuals to gain personal satisfaction and knowledge through self-advancement. These programs include opportunities for intellectual growth, the development of creative skills or talents, the learning of hobby or leisure time activities, and the opportunity of gaining civic and cultural awareness.

A class can be organized when fifteen interested persons are available and because of the organizational flexibility of these programs a wide variety of classes, lectures, seminars and workshops are conducted both on campus and in other locations within the service areas of the College.

TEACHERS' CERTIFICATE RENEWAL

Teachers' certificate renewal courses and workshops are provided by Cleveland Technical College in cooperation with the local public school systems within the county.

The courses and workshops are initiated by the College or the public school systems based on interests and needs expressed by school teachers and officials. In the past, these have included such courses as Great Decisions, Psychology, Guitar, Drawing & Sketching, Anthropology, and media workshops.

When a need for a particular course has been determined, Cleveland Tech, working cooperatively with the public schools in-service directors, plans and organizes the class, scheduling it for a time convenient to the participants.

Teachers receive one (1) C. E. U. toward certificate renewal for each 10 hours of successfully completed work.

COOPERATIVE SKILLS TRAINING PROGRAM

The primary goal of the program is to provide a comprehensive training program capable of meeting the expressed training needs of the industries of Cleveland County. The College works jointly with industrial representatives to assess their needs and provide appropriate training to upgrade their employees' skill levels.

Working cooperatively with industry, the staff selects course content, decides on the length, time and location for the course to be offered. Instructional personnel is selected for training courses on the basis of competence in the specific subject area to be taught.

The training is conducted on a competency based instructional mode. External and internal evaluation of trainee progress by the program staff and the trainee's employer is a cooperative venture.

COMPREHENSIVE EDUCATION PROJECT

The Comprehensive Education Project which is located at the correctional institute is structured toward meeting the academic, vocational, and social needs of selected medium custody inmates who plan to reside in the South Piedmont area when paroled.

Upon completion of the program, the inmates receive a certificate in the vocational areas of Electrical Installation and Maintenance (9 months), Welding (6 months), Carpentry (9 months), Plumbing (6 months), Food Service Management or Cooking and Baking (6 months). The inmates attend classes 30 hours a week.

Related subjects are required in the areas of reading, math, and human relations. Preparation for the GED examination is also available with the test being administered bi-yearly.

It is anticipated that each inmate who completes the Comprehensive Education Project will acquire the necessary vocational skills to obtain permanent employment under the work-release program and retain this employment upon his release.



CONTINUING EDUCATION

ACADEMIC COURSE DESCRIPTIONS

Algebra: A course designed to teach the basic fundamental concepts and operations of algebraic computations including grouping, factoring, ratio and proportion, and quadratic equations. Application to practical problems will be stressed. 33 hours.

Anthropology: The Ascent of Man, a series of 13 outstanding films that dramatically portray the interrelations of science and the humanities throughout history, is used as a basis for this course. The main interest is on the cultural evolution of man from pre-historic times up to the present. 20 hours.

Business Mathematics: A study of mathematical solutions to business problems including graphical representation of business data and the concept of various functions as tools for analyzing pertinent business data. 24 hours.

Great Decisions: A yearly study and discussion of the eight most important issues facing our nation at the current time. 20 hours.

Income Tax Preparation: Instructions are offered in basic fundamentals of individual income tax preparation. Topics considered are gross income, deductions and exemptions, joint and separate returns, tax computations, and methods of reporting income. Both state and federal forms are covered in this class. 30 hours.

Metric System: A basic course in the use of the Metric System. Conversion tables are used in the class in order that students may become familiar with metrical computations as compared to conventional methods. 24 hours.

Music Theory: The course is designed for pianists, organists, and other musicians with no formal training in music theory. Course includes major and minor scales; major, minor and dominant seventh chords; elementary harmony; simple modulation, transposition of simple pieces; sight singing; and an investigation of rhythm. 20 hours.

Psychology: The basic principles of psychology are explored and how they may be applied to practical problems of every day life. The aim of the course is to help people get along better in school, jobs and human relations. 33 hours.

Sign Language: Instruction is designed for the parents of deaf children and those who come in contact with deaf people. Classes begin with finger spelling and continue through the more difficult signs. 33 hours.

Sociology: A course designed to create a knowledge and awareness of the problems in society today and to fit the students for involvement in those problems that affect their personal lives. Information from other fields in the social sciences having a bearing on major social problems will be incorporated in the course. 33 hours.

Effective Speaking: Theory and practice in the art of effective speaking. Instruction will center around methods of planning and presenting the talk. Class reactions will be used as a method of evaluation and emphasis placed on the dynamics of public speaking. Self-confidence, poise, creative thinking, personality development, and effective communications with others will be stressed. 20 hours.

Securities and Investments: Stocks, Bonds, and mutual funds will be the central area of focus in this course. Discussions will include the operation of the stock exchanges, buying and selling procedures, analysis of stocks and bonds for investment purposes, and when to buy and sell. 33 hours.

Short Story Writing: This course will provide the beginning writer with an understanding of the basic concepts of the elements and structure of the short story. Content will include characterization, mood, perspective, plot and use of symbolism. 24 hours.

Speed Reading: A program designed for the average adult reader who needs to improve overall reading efficiency including speed, comprehension and flexibility. This course welcomes the supervisors and others in management positions who have much paper work and whose jobs require much reading. 24 hours.

CONTINUING EDUCATION

OCCUPATIONAL COURSE DESCRIPTIONS

Amateur Radio Operations: A course which deals with basic electronics and a working knowledge of Morse Code. Successful completion of the course prepares students for taking the FCC Amateur Radio Licensing examination. 45 hours.

Basic Horticulture: A course designed to familiarize participants with the fundamentals of soil fertility, the principles of attractive home landscaping, the characteristics of various ornamental plants suitable for home landscaping, vegetable gardening, plant maintenance, and small greenhouse structures. 20 hours.

Bookkeeping: A course dealing with methods of recording and reporting business records. Practical work is done involving business, individual and family bookkeeping. 30 hours.

Cardio-Pulmonary Resuscitation: A special class dealing with the various techniques of cardio-pulmonary resuscitation and the role of the nurse in this situation. 10 hours.

Driver Education: (48 hours, \$19.00) This class is designed for those students 18 years of age or over who wish to prepare for the State License Examination. The instructions lay the foundation for proper use of motor vehicle by developing mature driving attitudes, knowledge, skills and habits which are so important in today's complex traffic. The course consists of 30 hours of classroom instruction, 12 hours in the car as an observer, and 6 hours of actual driving practice. 54 hours.

Emergency Medical Technician (EMT): A more detailed course with emphasis on the development of skill in recognition of systems of illness and injuries and proper procedures of emergency care. Much stress will be given in demonstration and practice as a teaching method. Ten hours of in-hospital observation is included. 81 hours.

Emergency Medical Technician (EMT) Refresher: A course in skills training and retraining for Emergency Medical Technicians required once every two years. A minimum of 24 hours.

First Aid: This course is taught by an approved American Red Cross instructor and is open to anyone interested in learning how to care for the victims of an accident or illness. Topics covered include bandage application, use of tourniquets and temporary splints, care of eye and burn injuries, artificial respiration and safe use and storage of medicines. Students completing the course are certified by the American Red Cross. 15 hours.

Funeral Service Training: An annual variety of topics relating to funeral service personnel to meet continuing education requirements of the North Carolina State Board of Mortuary Science. Each topic is of three hours duration.

Home-Sitter Nursing: Instruction in the basic nursing skills that would aid students in caring for children, older people, and even themselves. Nursing skills such as bedmaking, baths, back-rubs, positioning, diet therapy, basic first aid, and a limited amount of basic psychology needed to relate productively with those who are sick are taught in this course. 50 hours.

Intensive Coronary Care: The role of the nurse in caring for the acutely ill cardiac patient is taught in this class. New techniques in diagnosis and treatment are used, including monitoring, resuscitation and other special procedures. Various audio-visual media and special professional personnel are utilized in the class. 30-120 hours.

Medical Terminology: A course designed to build a workable medical vocabulary for office and hospital clerical personnel. Terminology commonly used in the medical setting will be presented. Hours of course flexible to needs.

Motorcycle Mechanics: This course is especially designed for those people interested in servicing their own motorcycle and other small engines. Students who complete this course will be able to service and repair their own motorcycle. 36 hours.

Multimedia First Aid: A course covering the same topics but using American Red Cross films for demonstration followed by actual practice of the techniques by the students. 8 contact hours.

National Electric Code: This course is provided for those who wish to study the National Electric Code in preparation for the licensing examination. Instruction will include the latest code revisions, safety measures and standard practices in the wiring of single and multi-family dwellings, commercial establishments and industrial locations. 80 hours.

Nurse's Aide: A program designed to give instruction and practice in basic bedside care of the sick, especially the hospitalized patient. Basic procedures such as bathing, bedmaking, taking vital signs, collecting specimens, feeding the patient, moving, lifting and positioning the patient are included. The class consists of lectures and laboratory work in addition to some clinical practice in a local hospital. 120 hours.

Office Practice: A course for all clerical personnel stressing techniques of letter writing, correct spelling, communication skills both oral and written, and proper telephone usage. Hours adjusted to needs of students.

Outboard Motor Repair: A practical course in the theory and fundamentals of outboard engines. Actual practice in servicing and repairing engines and motors will enable the student to correct existing problems and minimize expenses on repairs. 30 hours.

Pharmacology: A course designed to assist students in acquiring understanding and skills basic to safe and intelligent administration of drugs. Emphasizes the need of the nurse to prepare and administer drugs safely, observe intelligently, and to report and record accurately; a review of specific drugs. Hours are flexible according to needs.

Pottery Design and Production: Instruction in producing ceramic, pottery, and porcelain products. Designed to train individuals to enter the trade with basic skills to perform effectively on the job or to begin their own shop. Methods, projects, and kiln operation are covered. 33 hours.

Practical Welding: Students will be given basic practice in all types of welding procedures and flame-cutting methods which are associated with mechanical and farm repair work. Safety procedures are stressed throughout the course in the use to tools and equipment. 33 hours.

Real Estate: This class is designed for prospective salesmen and others who desire to know the fundamental aspects of real estate. The course includes instruction in real property laws, appraising, brokerage, finance and the mechanics of closing. 99 hours.

Real Estate Appraisal: A course designed to follow or run concurrently with Real Estate sales dealing more specifically with the appraisal of property. Practical experience is given in appraising various types of property. 33 hours.

Recreational Therapy: A course using modifications and adaptations in recreation and physical education activities for nursing home and handicapped persons. A combination of physical activities and arts and crafts is used in order to bring about a well-rounded adjustment. Class hours flexible according to need.

Small Engine Repair: Instruction in the techniques of two and four cycle engine repair including reconditioning, tune-ups, replacement of parts and detection of engine trouble. 33 hours.

Textile Quality Control: Emphasis will be placed on principles and techniques of quality control and cost saving in textile manufacturing functions, responsibilities, structure, costs, reports, records, personnel, and customer relations. 27 hours.

Transportation and Traffic Management: Participants are acquainted with the important phases of Transportation and Traffic Management including classification of freight, principles of freight rates and tariffs, shipping documents and their application, special freight services, freight claims, construction and filing of tariffs, switching, routing, warehousing and distribution, materials handling, technical tariff interpretations, import and export traffic, construction and application of the Interstate Commerce Act and practice and procedure before the Interstate Commerce Commission. 48 hours.

Upholstery: Instruction includes the techniques of general furniture upholstery including webbing, springing, stuffing, trimming, sewing, restoring, repairing, mounting and tying springs. Equipment is furnished but students supply their own materials and may work on their own furniture with direction and assistance from the instructor. 60 hours.

Waiter-Waitress Training: A new class designed for those persons interested in this expanding occupation. The class offers excellent opportunities to learn restaurant operation and management while serving the public in a courteous and efficient manner. The class includes on-the-job training. 38 hours.

CONTINUING EDUCATION

PRACTICAL SKILLS COURSE DESCRIPTIONS

Auto Tune-ups: General troubleshooting of the automobile engine electrical system and fuel system including replacement of spark plugs, ignition points, condenser, rotor, distributor cap, coil, ignition, cables and wires. Setting up of engine with instruments such as a dwell meter, timing light, volt and amp meter, vacuum gauge and general carburetor repair such as fuel filter replacement and adjustment of automatic choke is also included. 33 hours.

Bricklaying: Instruction will be geared to practical work in how to mix and spread mortar, lay bricks, and proper use of the masonry rule. Simple construction projects will constitute a large part of the course. 88 hours.

Cake Decorating I: An ideal course for the homemaker who would like to learn the art and technique of decorating cakes for all occasions. Instruction will include preparation and application of various icings, borders, writing, drawing and making flowers for cakes. 33 hours.

Cake Decorating II: Instruction will center around the more difficult forms of cake decorating, including cakes for birthdays, anniversaries, weddings, and special occasions. Students should have completed the basic cake decorating course or have the equivalent skill before entering this course. 33 hours.

Candy Making: Instruction in how to make professional looking candies will be stressed. Recipes, correct cooking procedures, and use of candy thermometer will be covered. 33 hours.

Clothing Construction I: Designed for the new sewer or anyone who wishes to brush up on basic sewing techniques. Time will be devoted to learning the necessary equipment for successful sewing, proper selection and fitting of pattern and materials; step by step construction of one or more garments; lectures, demonstrations, practical applications of sewing procedures; individual instruction in use of machines during class time. 33 hours.

Clothing Construction II: More detailed instruction for more complicated assembling of garments such as underlining, different sleeves, collars, pockets, trims, buttonholes, and other items. Fashion and styling will also receive attention in this class. 33 hours.

Crewel Embroidery: The class will learn a variety of stitches with different types of threads; needlepoint and cross stitching. Students are encouraged to create their own designs. 33 hours.

Crochet: A course in the basic principles and art of crocheting, including the actual construction of articles and designs from simple to complex. Students furnish their own materials. 33 hours.

Custom Sewing: An advanced course for those students who wish to progress beyond dressmaking. Students will make suits, coats, men's and ladies' sportswear and other projects as desired by individual members of the class. 60 hours.

Floral Design: A practical course related to actual arrangements of live and artificial flowers. Students learn uses of flowers, containers and accessories, design principles, color and texture, and arrangements for special occasions. 33 hours.

Food Buying: Instruction in the efficient use of the food dollar for best nutrition. Menu planning, grocery shopping, selection of specific foods, use of leftovers, convenient foods, and non-grocery items are included. 24 hours.

Ground School Training: Designed for the student who wishes to become a private pilot. Instruction includes the theory of flight planning, interpretation of weather and radio communication procedures. The purpose of this class is to prepare students to take the FAA examination. 40 hours.

Home Gardening: A practical course in the planting and raising of vegetables for home use. Plots are given to participants to plant as they choose. Instructions and assistance are rendered by the school's agronomist. Spring.

Interior Decorating: Primary attention will be given to art and practice of decorating. Emphasis will be given to choice and arrangement of furniture; color and how to use it; flooring surfaces and floor covering; window treatment with draperies and curtains. 33 hours.

Jewelry Making: Instruction will be given in the basics of good design and creativity in various types of jewelry making. The use of jewelry tools in sawing, filing, soldering, setting, etc., will be stressed. Students will be responsible for their own supplies and materials. 33 hours.

Knitting: Instruction will be given in the basic stitches: knitting language—its terms, definitions, symbols and abbreviations; pattern reading; knit tips. Each student is asked to complete a small project during the course. 20 hours.

Microwave Cooking: Basic instruction will be offered in the many functions of a microwave oven. The cooking of all types of foods including vegetables, meats, and desserts will be covered. Proper utensils for microwave cooking will also be stressed. 33 hours.

Natural Childbirth: This class prepares the prospective mother emotionally, intellectually, psychologically, and physically for childbirth. Together, both prospective parents are actively involved in the birth of their child. Instruction includes techniques of body building exercises, stretching and breathing exercises, and neuro-muscular control (relaxation). 21 hours.

Needlepoint: The student learns to do background stitches; a variety of novelty stitches; transfer of graphs and charts to blank needlepoint canvas, and from that step to transfer on mesh canvas. Finally the student has learned to create a design to be worked in needlepoint for whatever purpose the student intends—upholstery material, draperies, framing, wall hanging, etc. 33 hours.

Nutrition and Weight Control: Training in selection of proper diet for best health, avoiding obesity and related disease, determining one's proper weight, how to achieve and maintain it. 18 hours.

Taxidermy: A basic course in the fundamental principles of taxidermy. Step-by-step methods are used beginning with birds and fish. Advanced classes progress to larger and more complex animals. A practical course. 33 hours.

Woodworking: This course is designed to help the woodworking enthusiast in the use, care and safe practice of basic hand and power tools. Considerable time will be spent in the shop in practical use of skills learned. Woodworking projects completed by the student may be retained for personal use. 45 hours.

CONTINUING EDUCATION

AVOCATIONAL COURSE DESCRIPTIONS

Bargello: This type of embroidery, Florentine canvas embroidery, dates back to the 13th century and is found in many museums. It is excellent in making pillows, cushions, all types of upholstery, plus eyeglass cases, vests, belts, jewelry cases and many other articles. 20 hours.

Ceramics: A popular class where students learn of the formation, finishing and firing of creative pottery. Finishing processes will include pouring, cleaning the greenware, decorating, glazing and firing for the finished product. 22 hours.

China Painting: A course in which various types of designs and flowers are applied to chinaware and tiles. Practice in painting and firing is included in the course. 33 hours.

Community Chorus: A mixed voice musical organization open to all adult members of the community service area with audition. Two or three major concerts featuring a variety of music are given by participants each year. Each rehearsal contains vocal technique and instruction in music reading. 32 hours.

Copper Tooling: A fascinating craft class where students make beautiful and useful objects for the home. Simple tools are used for various patterns on copper and brass which are then used to make pictures, plaques, waste baskets, flower urns, etc. 30 hours.

Decoupage and Repoussé: An interesting and inexpensive leisure time activity involving painting, sanding and finishing items such as table tops, ash trays, picture frames and other similar items which can be used for decorative purposes in the home. 24 hours.

Drawing: The course includes one-minute gesture drawings, contour drawings, modelled drawings and quick form studies. Media used are pencil, pen and ink, ink wash, crayon and water colors. Perspective and drapery studies are included. 33 hours.

Holiday Decorations: (Arts and Crafts). An exciting class with emphasis on handicrafts and hobbies for home decoration and other occasions. Students will learn to make useful items from such things as bottles, cards and numerous other scrap materials. 33 hours.

Macrame: A popular and fascinating craft class using various knot-tying materials to make hanging basket holders and other useful objects and designs for the home. 33 hours.

Painting with Acrylics: Same as for oils with more emphasis on modern techniques in the use of the versatile material which is easy to handle, fast drying, waterproof, and easy to mix for different colors. Instruction will involve mixed media and various painting methods. 33 hours.

Painting with Oils: Classes are organized for both beginners and more advanced students. Techniques used include brush and palette knife painting, color mixing, composition and design, canvas stretching. Types of painting include academic, impressionistic, expressionistic, abstract and modern. 33 hours.

Photography: Introduces the student to fundamental factors influencing the quality of image captured in the photograph. Students may study lighting, the primary subject, the field of view, color and camera techniques. 33 hours.

Piano I: Designed for adults with no experience in piano playing. Course covers the preparatory level of piano playing which includes learning the keyboard, learning to read the musical staff, learning note values and simple piano pieces. 32 hours.

Piano II: This course is a continuation of Piano I with emphasis on playing hands together. 32 hours.

Sketching: An interesting and basic class for the art student who wishes to learn more about drawing simple shapes, one and two-point perspective drawing, and shadowing. Practice exercises with various drawing materials will be used. 33 hours.

Stained Glass: The course is designed to teach all techniques in cutting and fitting stained glass in the making of lamps, planters, decorative ornaments, jewel boxes, pictures, etc. 33 hours.

Tole Painting: An interesting technique, rather than talent, where patterns of decorative design are painted on tin, wood, glass and metal. Designs are stenciled on material and painted in acrylics or oils. The art of tole painting is the way the brush is held and turned to make details. 24 hours.

Water Colors: In this class art students will work with various materials and equipment, color mixing, using wet and dry paper, composition and design. Other techniques will include watercolor tricks, inks and calligraphy. 33 hours.

SCHOOL FOOD SERVICE

These courses are developed by and offered in cooperation with the School Food Service Division of the North Carolina State Department of Public Instruction.

Overview of School Food Service: A basic orientation course presenting the history of school feeding, characteristics of a good program, personnel and human relations, nutrition and menu planning, organization and management, purchasing, storing, preparation and serving of food, sanitation and safety. 45 contact hours.

Procurement: A new school food service course designed to give school food service personnel instructions and helpful suggestions in the procurement of foods. 30 contact hours.

Nutrition and Menu Planning: This course offers in depth the role in nutrition of protein, fats, carbohydrates, minerals and vitamins; factors in developing good habits; dietary needs of children and youth; advanced work in planning and evaluating menus. 45 contact hours.

Care and Use of Equipment: This course stresses general care and safety in the use of equipment, and inventory and maintenance records. 45 contact hours.

Quantity Food Production Management: Designed for food service personnel with experience in methods of quantity food preparation which retain nutritive values; use of standardized recipes; use of weights and measures; use and care of equipment; timing, selection, preparation and service of foods for the school lunch. 45 contact hours.

HOTEL-MOTEL MANAGEMENT

These courses are offered in cooperation with the Educational Institute of the American Hotel-Motel Association.

Front Office Procedure: This is a basic course pointing up the need for close relationship between front office and management. It emphasizes the crucial human and public relations responsibilities of the front office staff. 24 contact hours.

Hotel-Motel Accounting: This course is designed to review the basic arithmetic skills needed and to develop an ease in their use; explain the accounting terminology and practices commonly used; provide practice in preparing a complete set of accounts and a simplified balance sheet and profit and loss statement. 24 contact hours.

Hotel-Motel Law: To illustrate the consequences of lack of foresight in the innkeeper's managerial functions and to create an awareness of the many responsibilities which the law imposes upon the innkeeper. 24 contact hours.

Introduction to Hotel-Motel Management: Traces the growth and development of the lodging industry from early inns to modern skyscraper hotels and highway motels. Also stressed: the importance of the "hospitality attitude" and the role of the hotel-motel as a competitive business in the free enterprise system. 24 contact hours.

Maintenance and Engineering: This course examines the organization of the engineering department and provides the technical information needed to establish effective preventive maintenance procedures. 24 contact hours.

Communications: This course has been designed as an overview of the uses and techniques of communication with particular reference to the innkeeping industry. It can be beneficial to employees at any level of the organization, but should be especially helpful to those having managerial responsibility. 20 contact hours.

HOSPITAL TRAINING

Hospital Human Relations: Designed to acquaint personnel with the importance of good human relations. Case studies illustrate many ways in which employees and patients react to each other. Much stress is placed on the importance of developing proper attitudes toward the patient and toward fellow employees. 20 contact hours.

Hospital Housekeeping: The basic problems of hospital housekeeping are covered with a good breakdown of what should be done daily and what can be done only periodically. There is much information on techniques for doing the job more effectively and with maximum efficiency. 40 contact hours.

Food Service Supervision for Hospital Personnel: This course consists of classroom instruction and supervised experience in a hospital kitchen. It provides a standardized program for food service supervisors which will qualify them to assume the responsibilities delegated to them by the dietitian and prepare them to meet the performance level of the current concept of supervisory leadership in their respective areas. 40 contact hours.

Custodial Training: This course attempts to teach basic procedures in cleaning different types of surfaces, health and sanitation procedures, how to get along with patients, and how to fit in with the full hospital program. 40 contact hours.

Modified Diets: This course deals with the many types of diets, the food intake, and the caloric count. It also goes into the various diseases that are associated with the human body and what role the actual diet contributes to the recovery of the patient. 20 contact hours.

Additional courses listed under the headings indicated, may be available.

FIRE SERVICE TRAINING

- Arson Detection**
- Civil Disorder**
- Firefighting Procedures**
- Hose and Ladder Practices**
- Forcible Entry**
- Rescue Practices**
- Salvage and Overhaul Practices**
- Ventilation**
- Hospital Fire Safety**
- Fire Apparatus Practices**
- Protection Breathing Equipment**

LAW ENFORCEMENT TRAINING

- Accident Investigation**
- Civil Law Procedure**
- Criminal Investigation**
- Crowd and Riot Control**
- Defensive Tactics**
- Introduction to Police Science**
- Jail and Detention Service Training**
- Narcotics Investigation**
- Supervision for Law Enforcement**
- Police Firearms Training**

For further information on these courses or any other courses, please contact the Department of Continuing Education, Cleveland Technical College.

SKILLS DEVELOPMENT CENTER

The Skills Development Center provides a variety of educational experiences for adults by guiding them in the development of individual strategies to improve the necessary skills for coping with change in today's complex society.

Striving to meet the spectrum of needs of the College and the community, the staff of the Skills Development Center provides flexibility within each program. The goal of the Center is to assist participants as they strive to become independent learners and productive citizens.

Educational, cultural, economic and social needs are considered when students apply for the various programs.

Following are the programs and services available through the Skills Development Center.

Basic Education Programs

Adult Basic Education Program

Adult High School Program

G. E. D. Preparatory Program and Examination

Learning Lab Programs

Human Resources Development Program

Cooperative Skills Training Program

Comprehensive Education Project

Adults, eighteen years of age or older, desiring to make application for any of the Skills Development Center programs should contact the appropriate departments for additional information.

ADULT BASIC EDUCATION PROGRAM

Adults who have less than a high school education may enroll in the Adult Basic Education Program. The program includes instruction in reading, writing, mathematics, social studies, science, and health education. In each of these areas, instruction is designed to assist students in meeting adult responsibilities by improving fundamental skills. Learning opportunities range from instruction for those who have received no formal education to those who have received as much as eight years of instruction.

Classes are organized into two groups. The first group is for those who need individual instructional guidance in basic reading and writing skills. In the second group, instruction is offered in reading and writing at a more advanced level than that of group one. The second group also receives instruction in basic science and social studies.

With successful completion of the subject matter taught in group two, the student may then advance into the high school program.

Students may enter ABE classes at any time. However, the staff recommends that individuals enroll during the registration period at the beginning of each quarter. In order to take advantage of the complete program being offered, the college encourages students to maintain attendance in these classes over a period of several school quarters.

There is no registration fee for ABE classes. Classes are held on campus and at various locations throughout the county.

ADULT HIGH SCHOOL PROGRAMS

The Adult High School Program is available to Cleveland County adults who have passed the eighth grade or the Eighth Grade Equivalent Test and wish to complete the high school program. The successful completion of twenty units and a passing score on the North Carolina Competency Test are required for graduation from the Adult High School Program. Any previously earned high school units are usually accepted toward the total requirements. The program is free, although there may be a small fee for textbooks. A graduation fee is charged to each student completing the high school requirements. The graduate will be issued a diploma or certificate from the school district in which he or she lives.

Adult High School students may arrange a schedule to complete high school through the Learning Lab program or the classroom program on campus, or at various locations throughout the county. Interested persons may enroll in the Adult High School Program at any time.

Requirements for graduation include the following:

English	4 units
Social Studies	3 units
Mathematics	3 units
Science	3 units
Electives	7 units
N. C. competency Test	

Upon completion of the Adult High School Program, graduates may enroll in one of the curriculum programs at Cleveland Technical College or another college of their choice.

GENERAL EDUCATIONAL DEVELOPMENT (GED) PREPARATORY/EXAMINATION

The GED (high school equivalency) Preparatory Program is designed for adults preparing to take the GED examination. The preparatory program is recommended but not required. Each student's academic skills are evaluated to determine specific instructional need. The student primarily studies in the areas of English, reading and math. After achieving specific skills and knowledge, the student is prepared to take the GED examination.

The examination tests knowledge and understanding of correct writing skills, social studies interpretation, natural science interpretation, literature interpretation, and mathematics. Upon successful completion of the examination the adult will be issued a Certificate of High School Equivalency by the North Carolina State Board of Education, and in turn, quality for admission to the College or, in general, for admission to more advanced educational opportunities.

The GED examination is scheduled monthly at Cleveland Technical College. A one day session is required in order to complete the test. There is a \$5.00 charge for the testing service. Application to be tested or re-tested may be made by any North Carolina adult.

LEARNING LAB PROGRAM

The Learning Lab, located on Tech's campus, includes the high school programs in addition to the General Interest Programs. General Interest Programs are available for adults who have already completed high school or college work but who want to continue their educational development in a non-structured curriculum. Wherever there is a need, the staff will seek to provide a non-credit program, offering whatever assistance possible with the available materials.

For their own self-improvement and personal interest, many community residents choose self-instructional courses such as reading improvement, math or English.

Because there are no organized classes in the Learning Lab, the staff will assist the student in arranging a study schedule to meet his or her needs. The student may attend the hours and days which are most convenient for him or her. The Learning Lab is open from 8:00 AM to 10.00 PM, Monday through Thursday and from 8:00 AM to 4:00 PM on Friday.

HUMAN RESOURCES DEVELOPMENT PROGRAM

The Human Resources Development Program provides pre-vocational training and counseling for unemployed and underemployed adults. Upon graduation, participants receive assistance with job placement or opportunities for skills training.

The goal of the Human Resources Development Program is to prepare persons for successful performance in the work force. The primary objective of the program is to reduce unemployment and underemployment by making it possible for the participants to become and remain productive employees.

Students in the Human Resources Development Program enroll for approximately five weeks of instruction. The curriculum includes an orientation to the workplace, instruction in reading, writing and arithmetic skills, and instruction in human relations, which are essential to securing and maintaining employment.

Some participants may qualify for financial assistance for educational expenses and living costs.

Classes are held on campus from 8:30 AM to 3:30 PM, Monday through Friday.

COMPENSATORY EDUCATION PROGRAM

The Compensatory Education Program provides classes in basic education, socialization, and community living skills for the adult mentally retarded.

This program is a cooperative effort through Cleveland County Mental Health, Cleveland Vocational Industries, Inc., and Cleveland Technical College. Application for this program is made through Cleveland County Mental Health.

ABLE CENTER ADULT BASIC LITERACY EDUCATION

The Adult Basic Literacy Education Center is located in the Learning Lab at the College. Future Centers at community locations are under consideration.

The ABLE Center provides computer assisted instruction in basic education/literacy and GED preparation. Interested persons should contact the College Learning Lab staff.

SMALL BUSINESS CENTER

The Small Business Center provides educational, informational, and referral services to meet the training needs of Cleveland County's current and prospective small business operators and employees. The Center's objectives are:

- * To provide accessible and flexible training programs for small business operators including workshops, seminars, and continuing education courses;
- * To provide accessible and flexible short-term courses for small business employees in skills training or upgrading for technological transfer and utilization in related occupations, e. g. bookkeepers, cashiers;
- * To provide instructional programs for college credit, through the college's business related curricula, e. g., individual curriculum courses and/or a degree program;
- * To develop a resource center of print and non-print reference materials for use by small business operators and employees;
- * To offer special assistance to small business owners and would-be owners via a network of referral services to the chambers of commerce, banks, the Small Business Administration, and other agencies such as the Department of Commerce;
- * To offer consultative services to small businesses on a direct one-to-one basis, through cooperation with Service Corps of Retired Executives (SCORE) and Active Corps of Executives (ACE).

LEARNING RESOURCES CENTER

Hours: 8:00 a.m. - 10:00 p.m. Monday - Thursday
8:00 a.m. - 4:00 p.m. Friday

The Learning Resources Center (LRC) is a multimedia facility designed to support the total educational program of Cleveland Technical College. The LRC includes: Library Services and Audiovisual Services. The merger of these components provides a broad range of services to meet the instructional and individual needs of students, staff, and the community members. The LRC staff offers both professional and technical assistance to meet the total institutional and community needs.

LIBRARY SERVICES

The Library has a growing collection of approximately 27,705 volumes, most of which are related to the Degree and Diploma programs. The selection of materials, both book and non-book, is done in consultation with faculty, students, and administration. The Library has a collection of local history materials that is used in conjunction with Continuing Education courses on local history for anyone who wishes to research local history and genealogy. The open shelf concept is used to encourage browsing and study. The library subscribes to approximately 224 periodicals. The audio-visual collection is intershelfed with the books for better accessibility.

AUDIO-VISUAL SERVICES

Functions of the audiovisual services section of the Learning Resources Center include the coordination of AV instructional materials and equipment and media productions.

There are over 5,370 AV acquisitions in the collection including films, cassette tapes, slides, records, filmstrips, film loops, transparencies, video tapes, etc. The department maintains the most up-to-date equipment for all software.

This includes portable equipment which is used in the classroom as well as the closed circuit TV system that is available in sixty classrooms, the Learning Resources Center, and various offices and lobbies as well. In addition, the Multipurpose Teaching Lab is an integral part of the Audiovisual Services Department.

Most of the AV materials may be checked out by students for use in the Learning Resources Center, in the classroom, or at home.

The Audiovisual Department is responsible for the operation of the College's community cable access Channel 22, which began broadcasting September, 1982. The community cable channel provides capabilities for delivery of educational, cultural, and public service programming to approximately 7,500 cable subscribers. This includes Shelby, Boiling Springs, Polkville, Patterson Springs, Fallston, Lawndale and surrounding areas.



PERSONNEL

BOARD OF TRUSTEES

APPOINTED BY THE CLEVELAND COUNTY COMMISSIONERS

David S. Banks, Vice Chairman	1989
837 North Morgan Street, Shelby, North Carolina	
Brooks Piercy, Sr.	1989
P. O. Box 751, Boiling Springs, North Carolina	
Grady K. Howard	1987
406 Edgemont Drive, Kings Mountain, North Carolina	
John F. Schenck, III, Chairman	1991
Cleveland Mills, Lawndale, North Carolina	

APPOINTED BY THE SCHOOL BOARDS OF CLEVELAND COUNTY

Mrs. Mary Lou Barrier	1987
Route 3, Lawndale, North Carolina	
David H. Atkinson	1989
P. O. Box 262, Lattimore, North Carolina	
Dr. Robert B. Litton	1989
P. O. Box 1346, Shelby, North Carolina	
Robert Howard Bryant	1991
703 Crescent Circle, Kings Mountain, North Carolina	

APPOINTED BY THE GOVERNOR OF NORTH CAROLINA:

Dean Westmoreland	1987
Route 1, Box 1160, Grover, North Carolina	
Mrs. Deborah H. McCartney	1989
47 Appian Way, Shelby, North Carolina	
Frank V. Beam	1989
700 Branton Drive, Shelby, North Carolina	
Stuart LeGrand	1991
P. O. Box 850, Shelby, North Carolina	
Current President, Student Government Association, Cleveland Technical College (Ex-Officio Member)	

PERSONNEL OF THE INSTITUTE (FULL-TIME)

OFFICE OF THE PRESIDENT

President	James B. Petty
B.S., Vocational Education, Clemson University	
M. A., Administration, Appalachian State University	
Ed. D., Nova University	
Administrative Assistant to the President	Frances Morgan
A. A. S., Cleveland Technical College	
Western Carolina University	

GENERAL ADMINISTRATION

Executive Vice President	Noel R. Lykins
B. A., University of Louisville	
B. D., Th. M., Southeastern Baptist Theological Seminary	
Ed. D., North Carolina State University	
Director of Research &	
Planning/Foundation	Albert Patton Hamner
B. A., University of Alabama	
M. A. Ed., Western Carolina University	
Director of Public Relations and Development	Dorothy Roark
B. S., M. A., Michigan State University	
Ed. S., Appalachian State University	
CAGS, Ed. D Candidate, Virginia Polytechnic Institute and State University	
Printshop Technician	Danny Dedmon
A. G. E., Cleveland Technical College	
B. A., Limestone College	

DIVISION OF BUSINESS AFFAIRS

Vice President of Business Affairs	James E. Greene
A. A., Gardner-Webb College	
B. S., Limestone College	
M. A., Appalachian State University	
Bookkeeper	Jane Webb
Southern Business College	
A. A. S., Cleveland Technical College	
Assistant Bookkeeper	Carolyn Queen
Gardner-Webb College	
Cleveland Technical College	
Security Officer	Glenn Poston
22 years experience with Cleveland County Sheriff's Department	

Purchasing Officer	Kay Allen
A. A. S., Cleveland Technical College	
B. S., Limestone College	
Bookstore Manager.....	Louise Hamrick
A. A., Gardner-Webb College	
Food Service Supervisor (Part-time)	J. L. Sarratt
Howard's Business College	

DIVISION OF INDUSTRY AND COMMUNITY SERVICE

Vice President of Industry and Community Service	Joe M. Hamrick
B. S., North Carolina State University	
M. A., Appalachian State University	
Doctoral Studies, North Carolina State University	
Dean of Continuing Education	David M. (Pete) Stamey
B. S., North Carolina State University	
M. A. Ed., Western Carolina University	
Ed. S., Western Carolina University	
Director of Continuing Education.....	John Kilby
B. S., M. A., Appalachian State University	
Ed. S., Western Carolina University	
North Carolina State University	
Director of Small Business Center	Anne Smevog Langley
B. A., Lenoir Rhyne College	
M. A. Ed., Western Carolina University	
A. A. S., Cleveland Technical College	
Doctoral Studies, University of North Carolina at Chapel Hill	
Doctoral Candidate, North Carolina State University	
Dean of Learning Resources	Haley C. Dedmond
A. A., Gardner-Webb College	
B. A., Limestone College	
M. A. L. S., Appalachian State University	
University of North Carolina at Chapel Hill	
Director of Library Services	Nettie Washington
B. S., Winston-Salem State University	
M. L. S., North Carolina Central University	
Appalachian State University	
Director of Audiovisual Services	Melvin Campos
B. A., Gardner-Webb College	
M. A. Ed., Western Carolina University	
Audiovisual Technician.....	Danny Wray Morton
A. A., Isothermal Community College	
University of North Carolina at Charlotte	
A. A. S., Cleveland Technical College	

Director of Instruction (ICS).....	Rebecca K. Cook
A. A., Gardner-Webb College	
B. A., Appalachian State University	
M. Ed., University of North Carolina at Charlotte	
Coordinator of Basic Programs.....	W. Cobern Pruitt
B. S., M. A. Ed., Ed. S., Western Carolina University	
Doctoral Studies, University of North Carolina at Greensboro	
Coordinator of Learning Lab Programs.....	M. Eugene Eskridge
B. S., M. A., Appalachian State University	
Director of Prison Program.....	Donald Smith
B. S., Clemson University	
M. A., Appalachian State University	
Ed. S., Western Carolina University	
Coordinator, HRD Program.....	Roberta Jean McCluney
B. S., North Carolina Central University	
Western Carolina University	
M. A., Appalachian State University	
Instructor/Records Maintenance - HRD.....	Nancy N. Hopper
A. A. S., Cleveland Technical College	
B. S., Gardner-Webb College	
Western Carolina University	
Appalachian State University	

DIVISION OF INSTRUCTION

Vice President of Instruction.....	C. Edwin White
A. A., Gardner-Webb College	
B. A., North Carolina State University	
M. A., Appalachian State University	
Dean of Allied Services.....	Gene C. Cox
B. S., Western Carolina University	
M. A., Gardner-Webb College	
Dean of Arts, Sciences, and Public Services.....	Dorothy P. McIntyre
A. A., Gardner-Webb College	
B. A., Limestone College	
M. A., University of North Carolina at Charlotte	
Ed. S., Appalachian State University	
CAGS, Ed. D., Virginia Polytechnic Institute and State University	
Dean of Business Programs.....	Madge Wray
B. S., North Carolina A and T University	
M. A., Winthrop College	
Director of Cooperative Education.....	Louise H. Martin
B. A., Meredith College	
M. A. Ed., Western Carolina University	

DIVISION OF STUDENT SERVICES

Vice President of Student Services.....	Sandra W. Hardin
B. B. A., University of Houston	
M. A. Ed., Western Carolina University	
Registrar and Director of Admissions.....	LouAnn Bridges
A. A. S., Cleveland Technical College	
B. S., Gardner-Webb College	
University of South Carolina at Spartanburg	
Director of Financial Aid and Veterans Affairs.....	Thomas C. Poston
A. A., Gardner-Webb College	
B. A., Limestone College	
M. A., Appalachian State University	
Ed. S., Western Carolina University	
Director of Recruiting and Counseling.....	Jean Francis
A. S. S., Cleveland Technical College	
B. S., Limestone College	
University of South Carolina at Spartanburg	
Director of Student Activities and Career Information.....	Adrian Wyrick
B. A., M. A., North Carolina Central University	

CLERICAL STAFF

Secretary, Executive Vice President.....	Pat Anderson
Appalachian State University	
Cleveland Technical College	
University of South Carolina at Spartanburg	
Secretary, Instruction.....	Lee Bryant
A. A. S., A. G. E., Cleveland Technical College	
Secretary, Business Office.....	Phyllis Canipe
Cleveland Technical College	
Secretary, Continuing Education.....	Nancy W. Carpenter
Jr. Secretarial Degree, Kings College	
Secretary, Student Services.....	Joyce Crumpton
A. A. S., Cleveland Technical College	
Western Carolina University	
Gardner-Webb College	
Computer Operator.....	Phyllis Haynes
A. A. S., Cleveland Technical College	
Secretary, Basic Programs.....	Joyce Hosch
A. A. S., Cleveland Technical College	

Secretary, Receptionist.....	Billie Jenks
Shelby Business College	
A. A. S., Cleveland Technical College	
Gardner-Webb College	
Secretary, Student Services.....	Pearl J. Mauney
A. A. S., Cleveland Technical College	
B. S., Gardner-Webb College	
Secretary, Student Services.....	Lydia McSwain
A. A. S., Cleveland Technical College	
Secretary, Student Services.....	Carolyn Petty
A. A. S., Cleveland Technical College	
North Carolina A and T University	
Limestone College	
Gardner-Webb College	
Secretary, Public Relations.....	Beverly Ponder
Gardner-Webb College	
A. S., Kings College	
Secretary, Learning Resources.....	Shirley K. Rodriguez
A. A. S., Cleveland Technical College	
B. S., Limestone College	
Secretary, Coop Education.....	Deller Sims
Cleveland Technical College	
Secretary, Learning Resources.....	Carolyn Smith
A. A. S., Cleveland Technical College	
B. S., Gardner-Webb College	
Secretary, Small Business Center & Cont. Education.....	Patti Wall
Dale Strelbel University	
Cleveland Technical College	

HOUSEKEEPING AND MAINTENANCE STAFF

Maintenance-Supervisor.....	Marvin R. Philbeck
Custodian.....	Carroll Hamrick
Custodian.....	Forest Littlejohn
Housekeeping-Supervisor.....	Columbus Church
Housekeeper.....	Dorothy Linda Black
Housekeeper.....	Jessie Eskridge
Housekeeper.....	Jessie J. Lott
Housekeeper.....	Emma Robbs
Housekeeper.....	Dorothy Surratt
Housekeeper.....	Robert Washington
Housekeeper.....	Patricia Wilson

FACULTY

Alex Alexander ..Instructor-Food Service & Mgmt., Prison Program
Johns Hopkins University
Johnson and Wales Culinary Arts College
UNC-Greensboro
A. A. S., Cleveland Technical College
Western Carolina University

Renee AllisonInstructor-Business Computer Programming
B. S., M. A., Appalachian State University
University of North Carolina at Charlotte

Ada BlankenshipInstructor-Ceramics and Pottery
University of South Carolina
University of Louisville
Certified Duncan Ceramic Products Teacher

Henry P. (Hal) Bryant, Jr.....Instructor-General Education
B. A., Gardner-Webb College

Ray FisherInstructor-Allied Services
A. S., Gaston College
B. S., Western Carolina University

James Walter FiteInstructor-Math and Science
B. S., M. A., Appalachian State University
Additional study, Indiana State University, University of
South Carolina, University of North Colorado

Woodrow GlennInstructor-Business Administration
B. S., Gardner-Webb College
Western Carolina University
M. A., Appalachian State University

Tommy Greene.....Instructor-Accounting & Business Admin.
A. A. S., Cleveland Technical College
B. S., Limestone College

Richard HeavenInstructor-Allied Services
Virginia Mechanics Institute
University of Richmond
Central Piedmont Community College
Western Carolina University
45 years experience in air conditioning, heating, and refrigeration

Everett Hollifield (Part-Time).....Instructor-Allied Services
General Motors Training School
Dupont Training Center
35 years experience in auto body repair

Allen HooperInstructor-Carpentry, Prison Program
Isothermal Community College
B. T., Appalachian State University

Rosalyn Hunt.....Instructor-Related Subjects, Prison Program
B. S., Fayetteville State University
Western Carolina University
M. A., Appalachian State University

Bo Jones.....Instructor-Allied Services
16 years experience in automotive mechanics
B. S., Western Carolina University

Kay Jones.....Instructor-Nursing
A. A., Gardner-Webb College
R. N., Rex Hospital School of Nursing
B. S. N., North Carolina Wesleyan College

James Danny Lipe (Part-time)Radiologic Technology
A. A., Central Piedmont Community College
B. S., Mars Hill College
N. C. Certificate in Radiologic Technology, Charlotte Memorial Hospital
Appalachian State University

Charles E. Mack, Jr.Instructor-Accounting & Business Admin.
A. A., Gardner-Webb College
B. A., Catawba College

Wilson MannInstructor-Allied Services
U. S. Army mechanics training
Dealer training
15 years experience in motor management

John B. MartinInstructor-Business Admin. & Mgmt.
A. A., Gardner-Webb College
B. S., M. A., Appalachian State University
North Carolina State University

C. W. MauneyInstructor-Welding, Prison Program
A. A. S., Cleveland Technical College
Diplomas in Auto Mechanics and Welding, Cleveland Technical College
B. S., Western Carolina University

Wilbur R. McBrideInstructor-Math & Science
B. A., Wofford College
M. A. Ed., University of North Carolina at Chapel Hill
Advanced study, University of Arkansas, University of Michigan,
University of Kansas, New Mexico State University, University of North Carolina at Chapel Hill

Fred McFarlandInstructor-Accounting & Business Admin.
A. A., Gardner-Webb College
B. A., Carson-Newman College
M. A., Appalachian State University

William B. McGinnis Instructor-General Education
Mars Hill Junior College
B. A., Furman University
S. T. B., Harvard University
S. T. M., Andover-Newton Theological Seminary
M. A., Boston University
Doctoral Studies, Boston University

Harry McKeithan Instructor-Plumbing, Prison Program
Gardner-Webb College
NC Shipbuilding School of Engineering
Certified Pipe Welder
Various trade schools (company sponsored)
B. S., Western Carolina University

Michael McSwain Instructor-Allied Services
A. A. S., United Electronics Institute
Western Carolina University

Joyce Meade Department Head-Bus. Admin., Sec. & Fashion
B. S., University of North Carolina at Greensboro
M. A., Winthrop College

Myra Morrison Instructor-Fashion
American Business and Fashion Institute at Charlotte
Lees McRae College
Cleveland Technical College
University of Nebraska
Specialized in fashion coordination, free-lance wardrobe
consultant, ten years experience in retailing

Bobby Poston Instructor-General Education
A. A., Gardner-Webb College
B. A., University of North Carolina
M. A., Appalachian State University
Appalachian State University

Alan Price Instructor-Secretarial
B. S., Western Carolina University
M. A., Appalachian State University

Franklin Pullen Instructor-Math and Science
B. S., North Carolina A and T University
M. S., University of Rhode Island
Rhode Island College
Appalachian State University

Robert Putnam Instructor-Electrical, Prison Program
North Carolina Vocational Textile School
22 years electrical experience

Roger Randall Instructor-Allied Services
National Institute Automotive Service Excellence Certification
21 years experience in automotive service
B. S., Western Carolina University

Kay Rast Instructor-Business Computer Programming
University of Georgia
Georgia State University
B. S., Gardner-Webb College

Charles D. H. Reynolds Instructor-Communications
B. A., Williams College
M. A., University of Chicago
Ph. D., University of Nebraska
Northwestern University
University of California at Berkeley
Rhode Island School of Design

Maxine Romney Instructor-Business Administration
B. B. A., City University of New York
M. Ed., Northeastern University
Vermont State Hospital

Linda Ross Instructor-Business Administration
LPN Diploma, A. A. S., Cleveland Technical College
B. A., Limestone College
M. S., North Carolina A and T University
North Carolina State University
Winthrop College

JoAnn Schilling Department Head-Radiologic Technology
R. T., Lewis-Gale Hospital School of Radiologic Technology
B. G. S., University of South Carolina
M. A. Ed., Western Carolina University
Appalachian State University

Michael Schwartz Department Head-Criminal Justice
B. S., The Citadel

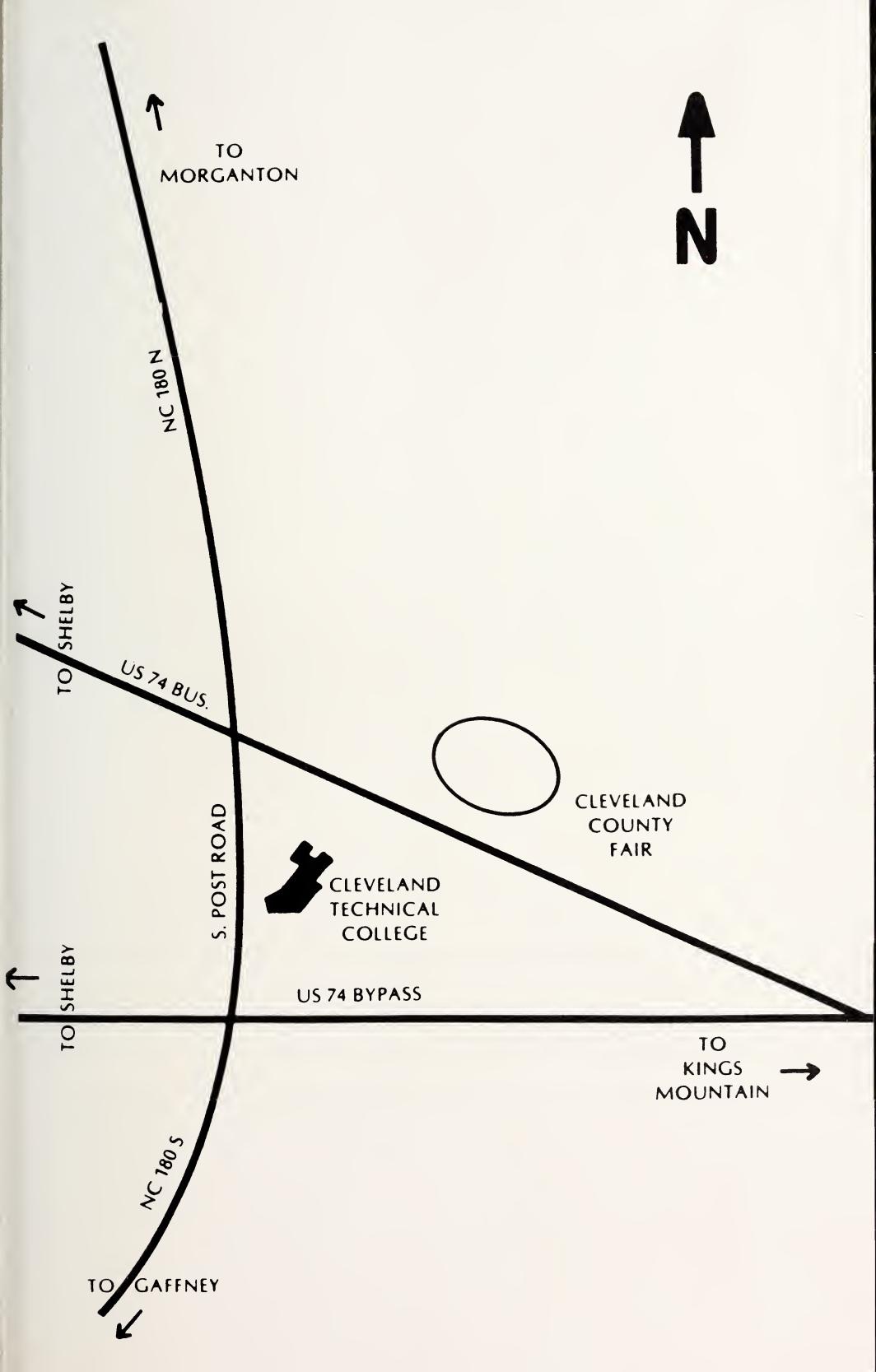
Jerome Scott Instructor-Business Administration
A. A., Morristown Junior College
B. S., Carson-Newman College
M. A., Appalachian State University

Danny Scruggs Instructor-Business Computer Programming
B. S., M. A., Appalachian State University
Cleveland Technical College

Joseph M. Southards Department Head-Math and Science
B. S., Gardner-Webb College
M. A., Appalachian State University

Ruth Stamey	Department Head-Nursing
A. A., Lenoir Rhyne College	
R. N., Shelby School of Nursing	
B. A., Limestone College	
Mary Ann Stark	Instructor-Fashion
A. A. S., Cleveland Technical College	
B. S., Winthrop College	
John Swofford.....	Instructor-Allied Services
U. S. Army welding schools	
22 years experience in commercial welding	
B. S., Western Carolina University	
Barbara Taylor	Instructor-General Education
B. S., Mississippi University for Women	
M. A., Appalachian State University	
Lawrence Kenneth Vassy	Instructor-Allied Services
Diploma-RCA Institute	
A. A. S., Cleveland Technical College	
B. S., Western Carolina University	
Hugh L. Walker, Jr...	Department Head-Accounting, Bus. Computer Programming, Management
A. A. S., Cleveland Technical College	
B. S., North Carolina State University	
M. A. Ed., Western Carolina University	
Bob G. Wells	Instructor-Allied Services
Military training school	
26 years experience as machinist	
A. G. E., Cleveland Technical College	
B. S., Western Carolina University	
Ronald Wright	Department Head-General Education and Communications Technology
A. A., B. A., Gardner-Webb College	
M. A., Western Carolina University	
Ed. S., Appalachian State University	
Ph. D., University of South Carolina	







Cleveland Technical College
137 South Post Road
Shelby, North Carolina 28150